

ウガンダ国 湿地管理プロジェクト (第3年次)

プロジェクト業務完了報告書

平成28年12月
(2016年)



独立行政法人国際協力機構 (JICA)



株式会社建設技研インターナショナル



株式会社 OYO インターナショナル



株式会社アースアンドヒューマンコーポレーション

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JR
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独立行政法人 国際協力機構 (JICA)



水・環境省 環境総局 湿地管理局
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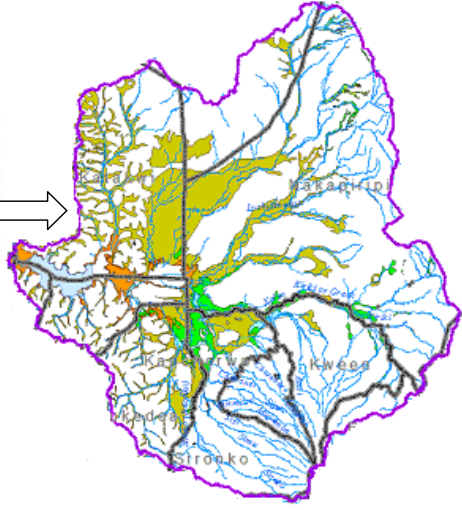
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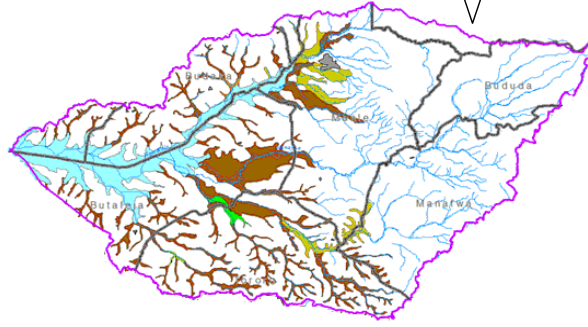
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Legend

- 1s: Broad leaved woodlots (seasonal)
- 3p: Bushland (permanent)
- 3s: Bushland (seasonal)
- 4p-s: Undefined
- 5p: Swamp forest
- 5s: Palm & thickets (seasonal)
- 6p: Palm & thickets (permanent)
- 6s: Seasonal Bushes and thickets
- 7p: Grassland (permanent)
- 7s: Grassland (seasonal)
- 8a: Papyrus
- 8b: Sedges
- 8c: Floating vegetation
- 9p: Subsistence farming (permanent)
- 9s: Subsistence farming (seasonal)
- 10p: Commercial farmland (permanent)
- 10s: Commercial farmland (seasonal)
- 11: Built up areas
- 12p: Open water (permanent)
- 12s: Open water (seasonal)



Awoja Wetland System



Doho-Namatala Wetland System



調査対象地域位置図

要 約

<p>第1章 業務の背景</p> <p>2012年に開始されたウガンダ国湿地管理プロジェクトは、当国東部の1) ナマタラ湿地システムおよび2) アウオジャ湿地システムに焦点をあて、ウガンダにおいて、湿地保全と賢明な利用のモデルを構築することを目標としている。</p>	<p>2012年に開始されたウガンダ国湿地管理プロジェクトは、当国東部の1) ナマタラ湿地システムおよび2) アウオジャ湿地システムに焦点をあて、ウガンダにおいて、湿地保全と賢明な利用のモデルを構築することを目標としている。そのために6つの成果を生み出すことが想定され、それらは1) 湿地情報データベースが改良される。2) 対象とする湿地システムにおいて、科学的情報が整備され、利用可能になる。3) 対象とする湿地システム及び県において、湿地管理計画が作成される。4) コミュニティ湿地管理計画に基づき、湿地の持続可能な利用のためのパイロット活動が実施される。5) 湿地関連活動が調和される。および6) 湿地管理に携わる C/P 機関職員等の能力が強化される。である。プロジェクトの上位目標は、「湿地の保全と持続可能な利用のモデルが普及する。」である。本報告書は、2016年の事業完了までに実施したすべての活動内容を記述し、その達成状況を評価した。また、事業実施から得られた教訓を共有し、さらに日本政府の支援が終了したあとも継続して、プロジェクトの受益者に便益がもたらされるよう勧告を行った。</p>
<p>第2章 業務実施と成果</p> <p>本章は、6つの成果を生み出すために実施された38の活動について記載した。本プロジェクトは、既に湿地管理局に移管され、その職員が現在、プロジェクトで構築されたネットワークの強化に取り組んでいる。NWISを改良することを目的とした成果1を生み出すために合計6つの活動を実施した。成果2は、湿地の資源評価を行うものであり、7つの活動を完了した。成果3は、湿地管理計画を策定するための活動として9つの活動を実施した。コミュニティ湿地管理計画に基づいたパイロット活動の実施が成果4であり、そのために9つの活動を完了した。湿地関連活動の調和を目標とした成果5は2つの活動から構成される。最後に成果6は、湿地管理に携わる C/P 機関職員等の能力強化を目標とし、5つの活動を完了した。</p>	<p>本章は、プロジェクトの開始から2016年末の完了までに実施したプロジェクト活動すべてを記載した。6つの成果を生み出すために実施した合計で36の活動について述べている。本プロジェクトは、既に湿地管理局に移管され、その職員が現在、プロジェクトで構築されたネットワークの強化に取り組んでいる。実施された活動は以下のとおりである。</p> <p>成果1 湿地情報データベースの改良</p> <p>1.1 不足情報・データの特定 1.2 データベース・レビューと再設計 1.3 ソフトウェア及びハードウェアの調達 1.4 インベントリーの様式作成 1.5 湿地情報データベースの試行運用 1.6 湿地情報データベースに係る研修</p> <p>成果2 対象とする湿地システムにおける科学的情報の整備と利用</p> <p>2.1 既存情報のレビュー 2.2 湿地調査チームの形成 2.3 実施計画の作成 2.4 湿地調査の実施 2.5 湿地インベントリーを更新、データ入力 2.6 意思決定支援ツールの設計 2.7 ツールとデータベースのリンクと試行</p> <p>成果3 対象とする湿地システム及び県における湿地管理計画の作成</p> <p>3.1 湿地システム管理委員会の組織 3.2 既存管理計画のレビューと更新 3.3 優先課題の特定 3.4 対応策の検討 3.5 湿地システム管理計画作成 3.6 パリッシュ代表者の参加を得て郡湿地管理計画を作成する 3.7 県技術計画委員会を設置する 3.8 県技術計画委員会が、その県の県湿地管理計画を作成する 3.8 各管理計画のレビュー・更新</p> <p>成果4 コミュニティ湿地管理計画に基づいたパイロット活動の実施</p> <p>4.1 パイロットサイトの選定 4.2 コミュニティ湿地計画・管理委員会を設置する 4.3 コミュニティ湿地計画・管理委員会とコミュニティ湿地管理計画を作成する 4.4 生計向上技術の特定 4.5 生計向上技術に係る住民への研修 4.6 環境モニタリング計画の作成・実施 4.7 規模拡大に向けた優先パイロット地区の選定 4.8 パイロット活動における支援規模の拡大 4.7 湿地管理計画のレビュー・更新</p> <p>成果5 湿地関連活動の調和</p> <p>5-1 主要な関連法案、規制、ガイドラインの見直し</p>

	<p>5-2 政策枠組みおよび関連施策を強化するための勧告</p> <p>成果6 湿地管理に携わる C/P 機関職員等の能力強化</p> <p>6.1 能力レベル・研修ニーズの把握</p> <p>6.2 「湿地管理マニュアル」の作成</p> <p>6.3 研修プログラムの企画・実施</p> <p>6.4 研修プログラムの評価</p> <p>6.5 プロジェクトの成果品の出版</p>
<p>第3章 プロジェクトの目標達成評価</p> <p>本章では、プロジェクトの評価結果を整理した。16の成果指標と比較した結果、当初の目標を概ね達成していると判断された。プロジェクト目標のレベルで重要な達成状況は、以下のとおりである。</p> <p>1. 生態モニタリングは、写真撮影、水質モニタリングおよび Relevé を利用した植生の記載を主な手法として採用した。流域レベルで評価をするならば、2015年に湿地境界を決定し、2016年に植林活動を開始したばかりで、現時点では、具体的な変化は現れていない。しかし、パイロットサイトでそれぞれ関連する水域沿いに保護地区を設置し、植林を行ったため写真撮影にてその変化は記録され、その生態特性は改善している。</p> <p>2. 全てのコミュニティにおいてプロジェクトで導入した持続的な生計向上手段が採用されている。これは本プロジェクトが参加的な手法を採用し、生計向上手段を選定したためである。</p> <p>3. 2016年11月15日時点で、以下3つのガイドラインが承認されている。1) NWIS ハンドブック、2) 郡湿地管理計画/県湿地管理計画 マニュアル、3) 湿地管理計画手順マニュアル</p>	<p>本章では、プロジェクトの評価結果を整理した。16の成果指標と比較した結果、当初の目標を概ね達成していると判断された。評価結果の要約は以下にまとめた通りである。</p> <ol style="list-style-type: none"> 1. 湿地観測地点、湿地モニタリング地点、河川、湖、保護地区、土壤図、植生図などのカテゴリーの湿地関連データを NWIS に導入済み。 2. ArcGIS オンラインを利用して NWIS のデータは公開済み。GIS のソフトウェアを持っていなくても湿地管理に係るデータにアクセスが可能である。 3. 湿地評価を実施し、2つの湿地システムの調査結果が報告書として整理された。調査結果は、湿地システム管理計画策定時に利用され、さらにウガンダ中央部・東部地域灌漑地区開発計画 (PISD) 実施に際して農業省とも情報を共有した。 4. 湿地システム管理計画、県湿地管理計画を策定する際に、県職員らが報告書を活用した。さらにコミュニティ湿地管理計画の策定にあたっても、それらを活用した。 5. 湿地システム管理計画は、2014年1月22日および24日に、ナマタラおよびアウオジャにおいてそれぞれ正式に署名された。 6. パイロットサイトを管理するすべての県において湿地システム管理計画にもとづいて県湿地管理計画が策定された。 7. パイロット地区内のコミュニティメンバーは、参加者の意見を集約して策定され、また、それらは県湿地管理計画に基づいたものである。 8. コミュニティの湿地保全に係る意識は、2015年と2016年を比較した質問票にて、18%向上したと判断された。 9. 110名のコミュニティメンバーへの質問票形式の聞き取りで、県職員に対しては89%、Sub-county 職員に対しては71%がその技術的支援に対し満足したと回答した。 10. Guideline for paddy rice cultivation を見直した結果、種々の課題が特定された。 11. 2016年9月27日に Afrique suites hotel で開催された会議課題が議論され、記録が確認された。 12. 質問票を利用した調査において、湿地管理局の職員およびパイロット地区を管理する県職員の少なくとも50%が湿地管理マニュアルを理解することができ、それを利用することができると回答し、本目標は達成されたと判断された。 13. 質問票を利用した調査により全国の環境・湿地管理担当の県職員の少なくとも50%が1) NWIS handbook, 2) 郡湿地管理計画/県湿地管理計画 マニュアル and 3) Wetland Management Planning Process マニュアルを理解でき、それを利用することができると回答しており、本目標は達成されたと判断された。 14. 生態モニタリングは、写真撮影、水質モニタリングおよび Relevé を利用した植生の記載を主な手法として採用した。流域レベルで評価をするならば、2015年に湿地境界を決定し、2016年に植林活動を開始したばかりで、現時点では、具体的な変化は現れていない。しかし、パイロットサイトでそれぞれ関連する水域沿いに保護地区を設置し、植林を行ったため写真撮影にてその変化は記録され、その生態特性は改善している。 15. 全てのコミュニティにおいてプロジェクトで導入した持続的な生計向上手段が採用されている。これは本プロジェクトが参加的な手法を採用し、生計向上手段を選定したためである。 16. 2016年11月15日時点で、以下3つのガイドラインが承認されている。1) NWIS ハンドブック、2) 郡湿地管理計画/県湿地管理計画 マニュアルおよび3) 湿地管理計画手順マニュアル

<p>第4章 主要な教訓</p> <p>第4.1節にプロジェクト成果毎に教訓を、第4.2節に、計画策定実施に基づき18の教訓を抽出した。</p> <ol style="list-style-type: none"> 1. NWISは、定期的にデータが更新されて初めて意味があり、データ共有の手続きを構築しておくことが重要。 2. 意志決定システムは、種々の既存の意志決定のツールを組み合わせで作成したが、今後も、他の意志決定ツールと組み合わせで発展させていくことが重要。 3. 計画策定に参加するステークホルダーの選定を慎重に進めることが重要。 4. 生計向上手段に係る活動を開始するには、住民が優先する活動に焦点をあてるために十分な対話が必要であり、さらに財務面、社会面、組織面の検討が必要となる。 5. 成果5に係る活動は、政策改善をもたらす活動と位置付けられる。 6. 関連プロジェクトとの調整を図り、能力開発に相乗効果をもたらした。 	<p>第4.1節ではプロジェクト成果毎に教訓を記載した。また、第4.2節では、計画策定実施段階から得られた18の教訓を抽出した。以下に、プロジェクト成果毎の教訓を記載した。</p> <ul style="list-style-type: none"> ✓ 成果1 NWIS 運営：GISデータの収集には、時間を要し、段階的に進める必要があった。NWISは、定期的にデータが更新されて初めて意味のあるものであり、そのためデータ共有の手続きを構築しておくことが重要であろう。また、NWISの情報管理のためには、十分な予算が確保されることが前提であることが新たに認識された。 ✓ 成果2の湿地評価および意志決定システム：関連情報が省庁間に分散しており、評価実施のためのデータ集計にも時間を要した。意志決定システムは、カンパラマトリックスを始め種々の既存の意志決定のツールを組み合わせで作成したが、今後も、他の意志決定ツールと組み合わせで発展させていくことが重要である。 ✓ 成果3の湿地管理計画策定：計画策定に参加するステークホルダーの選定を慎重に進めることが重要と判断された。また、政治家とコミュニティが、特に重要なステークホルダーと考えられた。湿地管理計画は、その他の天然資源管理計画を反映させる必要があるが、同様に流域管理計画など他の資源管理計画も、湿地管理計画を反映させることが重要である。同時に、これら計画を県あるいは郡の開発計画に取り入れることも重要である。湿地システム管理計画は、精度面の検討が必要となるが、機能させるためには、地方政府組織に統合していくことが必要である。また、DWAPは、即座に具体的な活動へ移行させることが可能であり、政府の関連計画に取り入れることも容易である。 ✓ 成果4のコミュニティレベルの活動：生計向上手段に係る活動を開始するには、住民が優先する活動に焦点をあてるために十分な対話が必要であり、さらに財務面、社会面、組織面の検討が必要となる。参加するコミュニティに対し、生計向上活動と湿地管理の関係を十分に認識させることも重要である。 ✓ 成果5の水稻ガイドライン：政策統合は時間を要する活動であり、プロジェクトの範囲を超えた活動になる。しかし、本活動は、政策改善をもたらす活動と位置付けられる。 ✓ 成果6の能力開発：関連プロジェクトとの調整を図り、能力開発に相乗効果をもたらした。また、JCCメンバーを、相互に取り込むことにより、関連省庁の強化が実現した。それにより、本プロジェクトの原則を他のプロジェクトにも活かすことが可能となった。
<p>第5章 勧告</p> <p>事業完了後も受益者に便益を提供し、持続性を確保するために勧告を行った。そのうち主要なものとして以下を含む。</p> <ol style="list-style-type: none"> 4. 湿地管理局はNWISホームページ維持のための中長期的策としてNWISホームページを省のウェブサイトに移転するか、あるいはリンクを張る。 5. 湿地管理局は水資源総局と連携し、情報交換を進め、両湿システムのInter-district Implementation Committeeの支援をする。 7. 湿地管理局は少なくとも6か月の期間、パイロット活動の監督とモニタリングを実施する。 8. 湿地管理 	<p>事業完了後も受益者に便益を提供し、持続性を確保するために以下の事項を勧告する。</p> <p>NWISの継続的な利用のために以下事項を勧告する。</p> <ol style="list-style-type: none"> 1 湿地管理局はArcGISの適切な維持のために年間UGX 4.4 millionの予算を確保する。 2 湿地管理局はArcGISの予算確保が困難となった時のために、QGISの利用を進め、拡大する。 3 湿地管理局はNWISホームページ維持のための短期的策として、年間UGX 417,900の予算を確保する。 4 湿地管理局はNWISホームページ維持のための中長期的策としてNWISホームページを省のウェブサイトに移転するか、あるいはリンクを張る。 <p>関連県での活動を支援するために以下の事項を勧告する。</p> <ol style="list-style-type: none"> 5 湿地管理局は水資源総局と連携し、情報交換を進め、両湿システムのInter-district Implementation Committeeの支援をする。 6 湿地管理局は東部地域コーディネーターを介して、チョガ流域管理事務所との連携を図り、湿地管理と流域管理の統合を一層進める。 <p>コミュニティで始められた活動を支援するために、以下の事項を勧告する。</p> <ol style="list-style-type: none"> 7 湿地管理局は少なくとも6か月の期間、パイロット活動の監督とモニタリングを実施する。 8 湿地管理局は関連する県職員と協力して、例えば第3次北部ウガンダ社

<p>局は関連する県職員と協力して、例えば第3次北部ウガンダ社会活動基金（NUSAF3）などの資金を活用して、支援資金を確保する。</p>	<p>会活動基金（NUSAF3）などの資金を活用して、支援資金を確保する。</p> <p>9 県職員は、コミュニティでの活動支援のために、それらを県開発計画に統合し、無償資金の提供を確実なものとする。</p> <p>10 湿地管理局はチョガ流域管理事務所および JICA 事務所と協力し、ウガンダ中央部・東部地域灌漑地区開発計画（PISD）および本湿地管理プロジェクト双方の成果を活用し、相乗効果を高められるよう配慮する。上位目標達成のために以下の事項を勧告する。</p> <p>11 湿地管理局は上位目標達成のために方針を決定し、具体化の上、予算確保を図る。</p>
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ウガンダ国 湿地管理プロジェクト

業務完了報告書

目 次

	頁
第 1 章 業務の背景	1-1
1.1 業務の背景.....	1-1
1.2 プロジェクトデザインマトリックスの変更.....	1-2
1.3 業務の概要.....	1-2
1.3.1 業務の目的および指標.....	1-2
1.3.2 対象地域.....	1-3
1.3.3 プロジェクトの実施期間とフェーズ分け.....	1-5
1.3.4 業務範囲.....	1-5
1.3.5 プロジェクト完了報告書の構成.....	1-6
第 2 章 業務実施と成果	2-1
2.1 成果1 湿地情報データベースの改良.....	2-1
2.2 成果2 対象とする湿地システムにおける科学的情報の整備と利用.....	2-8
2.3 成果3 対象とする湿地システム及び県における湿地管理計画の作成.....	2-13
2.4 成果4 コミュニティ湿地管理計画に基づいたパイロット活動の実施.....	2-20
2.5 成果5 湿地関連活動の調和.....	2-28
2.6 成果6 湿地管理に携わる C/P 機関職員等の能力強化.....	2-29
2.7 その他の重要な活動.....	2-33
第 3 章 プロジェクトの目標達成評価	3-1
3.1 概要.....	3-1
3.2 成果の達成状況.....	3-1
3.3 プロジェクト目標の達成状況.....	3-3
第 4 章 主要な教訓	4-1
4.1 教訓の概要.....	4-1
4.2 教訓の具体的な内容.....	4-2
第 5 章 勧告	5-1

報告書内表

	頁
表 1-1 プロジェクトデザインマトリックスの変更	1-2
表 2-1 NW-GIS に新たに加えられた情報	2-1
表 2-2 調達したソフトウェア	2-5
表 2-3 契約した保守サービス	2-5
表 2-4 調達したハードウェア一式	2-5
表 2-5 県事務所へ提供したハードウェア一式	2-6
表 2-6 NWIS/NWIS-GIS に関する研修の内容	2-8
表 2-7 湿地調査チームの形成	2-9
表 2-8 湿地評価のためのサブプロジェクトのインベントリ	2-10
表 2-9 主要な土壌タイプの特徴と管理手法	2-11
表 2-10 Soil Wetland Threat Matrix (Logical Design)	2-12
表 2-11 カンパラマトリックス	2-12
表 2-12 湿地管理計画レビュー質問票	2-13
表 2-13 制度上の主な課題と対応案	2-14
表 2-14 生物・物理に関する主な課題と対応案	2-14
表 2-15 社会経済に関する主な課題と対応案	2-15
表 2-16 湿地システム管理計画作成のためのワークショップと現地活動	2-16
表 2-17 郡湿地管理計画策定のためのワークショップ	2-17
表 2-18 県湿地管理計画策定のためのワークショップ	2-18
表 2-19 ナマタラ湿地システムのパイロット事業候補地	2-21
表 2-20 アウオジャ湿地システムのパイロット事業候補地	2-22
表 2-21 生計向上技術	2-23
表 2-22 モニタリングにおける役割分担	2-27
表 2-23 能力レベル・研修ニーズの把握	2-29
表 2-24 全国研修	2-30
表 2-25 日本における研修の参加者	2-31
表 2-26 日本における研修の内容	2-31
表 2-27 プロジェクトの成果品の出版	2-32
表 2-28 水環境省に供与された機材リスト	2-33
表 2-29 2つの湿地システムの県に供与された機材リスト	2-34
表 2-30 ワークショップでの検討項目および合意内容	2-35
表 2-31 ラムサール COP12 におけるサイドイベントのフォローアップ	2-36

表 3-1 プロジェクト成果の達成状況	3-1
表 3-2 プロジェクト目標の達成状況	3-3
表 4-1 湿地管理の実施に基づく主要な教訓	4-2

報 告 書 内 図

図 1-1 東部地域に位置する2つの湿地システム	1-4
図 1-2 ナマタラ湿地システムの関連県	1-4
図 1-3 アラジャ湿地システムの関連県	1-5
図 2-1 NWIS の過去と復帰	2-3
図 2-2 NWIS の情報発信の概要	2-4
図 2-3 NWIS の試行	2-6
図 2-4 意志決定システムの概念図	2-11
図 2-5 ナマタラ湿地システムのパイロットサイト	2-21
図 2-6 アウオジャ湿地システムのパイロットサイト	2-22
図 2-7 湿地境界設定の概念図1	2-24
図 2-8 湿地境界設定の概念図 2	2-24
図 2-9 GPS を利用した湿地境界設定の例	2-25
図 2-10 湿地システムレベルのモニタリング体制の概念図	2-26

添 付 資 料

添付資料 1 Project Design Matrix (Original)	A1-1
添付資料 2 Project Design Matrix (Revised) on Date: 19th June 2014	A2-1
添付資料 3 Project Design Matrix (Revised) on Date: 21st July 2015	A3-1
添付資料 4 Project Design Matrix (Updated) on 9st December 2015	A4-1
添付資料 5 Project Flowchart	A5-1
添付資料 6 General management policy for each of the major soil types	A6-1
添付資料 7 Selection criteria for Pilot projects	A7-1
添付資料 8 Basic Steps in the Community Wetland Management Planning Process	A8-1
添付資料 9 Description of Income Generation Activity	A9-1
添付資料 10 Implementation Guidelines	A10-1
添付資料 11 List of Nation-wide training participants	A11-1
添付資料 12 Report on Regional Symposium	A12-1
添付資料 13 Assignment of Japanese Experts	A13-1
添付資料 14 Minutes of the Joint Coordination Committee Meeting	A14-1

略称

CAO	Chief Administrative Officer
CBWMP	Community-Based Wetland Management Plan
COP	Conference of the Parties
DCDO	District Community Development Officer
CDD	Community Driven Development
DDP	District Development Plan
DEC	District Executive Committee and District Environmental Committee
DEO	District Environmental Office
DFO	District Forest Officer
DPO	District Planning Officer
DPU	district planning unit
DSS	Decision Support System
DTPC	District Technical Planning Committee
DWAP	District Wetland Action Plan
DWD	Directorate of Water Development
DWO	District Wetlands Officer
DWRM	Directorate of Water Resources Management
EIA	Environmental Impact Assessment
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
FMP	Framework Management Plan
GIS	Geographical Information System
GIZ	Gesellschaft für Internationale Zusammenarbeit
GOJ	Government of Japan
GOU	Government of Uganda
GPS	Global Positioning System
HTML	HyperText Markup Language
IGA	Income Generating Activity
IRR	Internal Rate of Return
JCC	Joint Coordinating Committee
JICA	Japan International Cooperation Agency
JV	Joint Venture
KML	Keyhole Markup Language
KMZ	Keyhole Markup Language Zipped
M/M	Minutes of Meeting
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MM	Man-Month
MOU	Memorandum of Understanding
MWE	Ministry of Water and Environment
NAAS	National Agricultural Advisory Service
NARO	National Agricultural Research Organisation
NEMA	National Environmental Management Authority
NFA	National Forest Authority
NGO	Non-Governmental Organization
NUSAF	Northern Uganda Social Action Fund Project
NWIS	National Wetland Information System
ODA	Official Development Assistance

OJT	On-the-Job Training
PDM	Project Design Matrix
PISD	Project on Irrigation Scheme Development
QGIS	Quantum GIS
R/D	Record of Discussions
S/C	Sub-county
SAACO	Savings and Credit Cooperative Organizations
SQL	Structured Query Language
SWAP	Sub-county Wetland Action Plan
TOR	Terms of Reference
UGX	Ugandan Shillings
W/S	Workshop
WMC	Wetland Management Committee
WMD	Wetland Management Department

第 1 章 業務の背景

1.1 業務の背景

ウガンダ国(以下「ウ」国)は全国土の 10-13%が湿地と言われている。湿地は生物多様性保全において重要な役割を担っている他、地域住民に対して生活用水・食料等の供給、生計手段の提供、洪水被害の軽減等、多様な生態系サービスを提供している。

「ウ」国政府は、湿地の保全と持続可能な管理を重要な課題と位置づけており、1995 年に湿地帯の保全と管理に係る国家政策を策定し、欧米ドナーの支援のもと、湿地管理に係る各種技術ガイドライン及び「湿地セクター戦略計画(2011-2020)」等の作成にも取り組んできた。また、2005年11月には、アフリカ大陸では初めてとなるラムサール条約締約国会議(COP9)を開催しており、「ウ」国政府関係者の湿地保全への意識は高い。「ウ」国の湿地管理行政は、政策立案を担う水・環境省の湿地管理局及び地方レベルの計画を立案し実施する県の自然資源課並びにコミュニティに対して直接技術指導及び普及活動を行う郡等により、様々な行政レベルで行われている。また、湿地に係る情報データについては、他ドナーの支援によって作成された簡易な湿地情報データベースを用いて管理している。しかし、湿地行政に不可欠な湿地管理計画は、未作成もしくは実施に移されていない場合が多く、また、湿地の管理に必要な情報・データは十分に整備されていないのが実情である。そのため、稲作が盛んな東部と中央部の湿地帯周辺等において、湿地の保全価値が十分に評価されないままに開墾が進められており、「ウ」国全土では最近 15 年間で約 25%の湿地が減少したと言われている。その結果、土壌や水環境が過度に攪乱され、湿地に生息する鳥類・魚類・両生類等の生息環境の悪化が懸念されている。また、水位の低下や土壌浸食が発生し、米の収穫量が減少しているとの報告もある。更に、保全の重要性が国際的にも特に高い 12 か所のラムサール条約登録湿地についても法的な保護の対象となっておらず、乱開発が進行している例も散見される。

このような状況のもと、過去のドナー等による支援の成果を活用しつつ、より包括的・科学的に「ウ」国の湿地の現状を調査し、重要湿地に係る情報の整備や管理計画の作成等を通じ、住民参加による湿地の保全と持続可能な利用の両立を推進するため、「ウ」国政府は湿地の持続可能な管理に係る技術協力プロジェクトを我が国に要請した。これを受けて、JICA は、2011 年 4 月に詳細計画策定調査団を派遣し、協力の枠組みについて「ウ」国政府と合意した。その後、2011 年 10 月 28 日に「湿地管理プロジェクト」(以下、本プロジェクト)に係る討議議事録(以下 R/D)を署名・交換した。この際、本プロジェクトのプロジェクトデザインマトリックスが添付され、それは本報告書の添付資料に示した通りである。

1.2 プロジェクトデザインマトリックスの変更

本プロジェクトの実施中に、プロジェクトデザインマトリックスの見直しを行い、いくつかの変更が加えられた。2015年の12月に行われたモニタリングの際に主要な変更が加えられ、その結果、以下の活動および成果が追加された。

以下表に、これまでのプロジェクトデザインマトリックスの変更の経緯を整理した。詳細は、添付資料に示した。

表 1-1 プロジェクトデザインマトリックスの変更

添付資料	タイトル
添付資料 1	Project Design Matrix (Original)
添付資料 2	Project Design Matrix (Revised on 19th June 2014)
添付資料 3	Project Design Matrix (Proposed on 21st July 2015)
添付資料 4	Project Design Matrix (Revised on 9th December 2015)

1.3 業務の概要

1.3.1 業務の目的および指標

上位目標、プロジェクト目標、アウトプット等は以下のとおりである。プロジェクト目標は、ウガンダにおいて、湿地保全と賢明な利用のモデルが構築されるであり、プロジェクトの上位目標は、「湿地の保全と持続可能な利用のモデルが普及する。」である。また、プロジェクト目標の指標は、1) パイロットサイトにおける生態モニタリング計画に基づいて調査の結果、各地の生態特性が変化していないか、あるいは改善している。2) プロジェクトにより導入された生計向上活動が少なくとも活動の参加者の半数以上で適用される。3) 湿地管理マニュアルが、湿地管理局の公式資料として承認される。の3点である。プロジェクト目標および成果指標は以下に整理した通りである。

湿地情報データベースが改良される。	1 国家湿地情報システム (NWIS) に湿地管理に必要なデータカテゴリーが追加される。 2 他の関連機関が NWIS の情報にアクセスすることができる。
対象とする湿地システムにおいて、科学的情報が整備され、利用可能になる。	1 詳細資源評価報告書が作成され、関連機関と共有される。 2 他の関連機関が湿地管理に係る詳細資源評価にて収集された情報を利用することができる。

- | | |
|---|--|
| 対象とする湿地システム及び県において、湿地管理計画が作成される。 | <ol style="list-style-type: none">1 2つの湿地システムに関して、湿地システム管理計画が作成される。2 湿地システム管理計画との整合性ある県湿地管理計画が、パイロットサイトを管理する県の半数以上で策定される。 |
| コミュニティ湿地管理計画に基づき、湿地の持続可能な利用のためのパイロット活動が実施される。 | <ol style="list-style-type: none">1 コミュニティの声を反映し、かつ県湿地管理計画と整合性あるコミュニティ湿地管理計画が作成される。2 コミュニティの湿地保全に係る意識が向上する。3 少なくとも50%のパイロット活動参加者が、地方政府職員が提供する。持続的生計向上案に関する技術指導に満足する。 |
| 湿地関連活動が調和される。 | <ol style="list-style-type: none">1 関連政策、法令および規制などに関し、課題が特定される。2 ワークショップあるいはシンポジウム等で議事録が作成される。 |
| 湿地管理に携わるC/P機関職員等の能力が強化される。 | <ol style="list-style-type: none">1 パイロットサイトの管理に係る湿地管理局職員および地方政府職員のうち少なくとも50%が湿地管理マニュアルを理解し、利用することができる。2 全国の県湿地管理担当官の50%以上の職員が湿地管理マニュアルを理解し、利用することができる。 |

本プロジェクトの全活動は、フローチャートの形式で整理し、添付資料5に示した。

1.3.2 対象地域

本プロジェクトでは、1) ナマタラ湿地システムと2) アウオジャ湿地システムが選定され、両湿地システムで本プロジェクトのほとんどの活動が実施される。いずれも東部地域に位置し、隣接する湿地システムではあるが、それぞれ特徴的な生態を有している。



図 1-1 東部地域に位置する2つの湿地システム

ナマタラ湿地システムは、Budaka, Bududa, Butaleja, Kibuku, Manafwa, Mbale, Pallisa および Tororo の8つの県から構成されている。本湿地システム中央部は、1970年代より水稲生産への利用が進められている。全面積は、2,299 km²である。

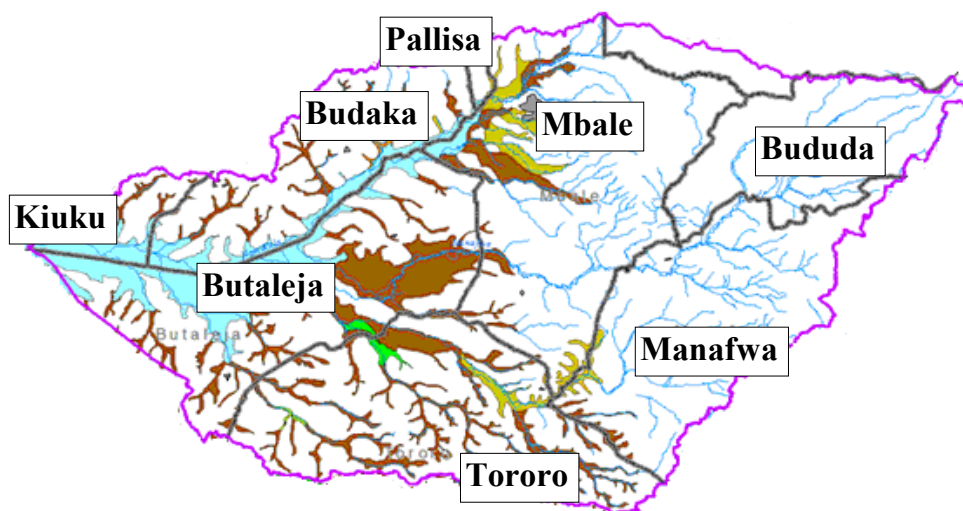


図 1-2 ナマタラ湿地システムの関連県

アウオジャ湿地システムは、Katakawi, Soroti, Amuria, Kumi, Ngora, Napak, Bukedea, Sironko, Bulumbuli, Kween, Kapchorwa および Nakapiripirit の12県からなり、ビシナ湖およびオペタ湖の2つのラムサールサイトを有している。全面積は10,281 km²である。

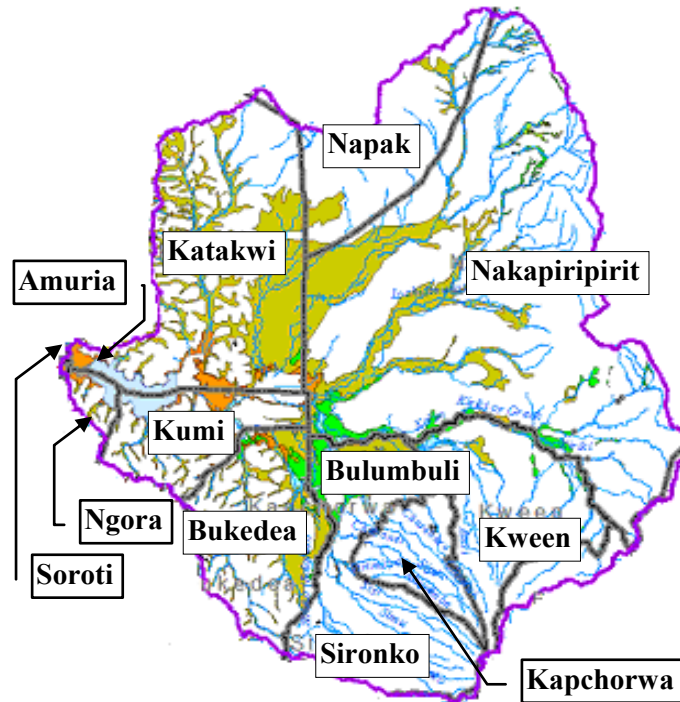


図 1-3 アロジャ湿地システムの関連県

1.3.3 プロジェクトの実施期間とフェーズ分け

国際協力機構による支援は、当初、2012年から2016年3月までの4年間の期間でウガンダ国の支援を行う予定であった。しかし、9か月間の追加活動期間を設け、当初のR/D通りに5年間の活動とすることが勧告され、双方で合意された。その結果、2016年の12月までプロジェクトの期間を延長し、合計59ヶ月の活動が行われた。

第1年次：2012年3月～2013年11月

第2年次：2013年12月～2014年12月

第3年次：2015年1月～2016年12月

1.3.4 業務範囲

本プロジェクトは、2011年10月28日に書名されたR/Dおよび、2011年4月21日に署名されたM/Mに基づき実施する。これらの契約はJICAより発行された業務指示書ならびに技術提案書要請書に記載されている活動の実施を目的としたものであるが、本プロジェクトは上位目標達成を視野に入れて実施されるものである。

1.3.5 プロジェクト完了報告書の構成

本報告書は5章から構成され、本章は、プロジェクトの背景について記載し、プロジェクト実施中に行われた変更事項について特に強調して記載した。第2章では、これまでに完了したプロジェクトの活動を記述している。この章では、重要事項のみを報告書本文に記載し、それ以外の詳細情報については、添付資料に示した。前述のように活動の一般的なフローについては、添付資料5に示した通りである。第3章は、終了時評価の結果について、その評価結果の要約を示している。第4章は、本プロジェクトの実施から導かれた18項目の教訓を記述した。最後の章は、日本政府による支援が完了した後、受益者が継続して本プロジェクトの便益を享受できるよう勧告を示した。

第 2 章 業務実施と成果

2.1 成果 1 湿地情報データベースの改良

1.1 不足情報・データの特定

科学的なデータや情報のギャップを明らかにするために、関係機関との会合を開催した。すなわちウガンダ国における情報システムの概況を把握し、また、特に詳細湿地評価に必要なと思われるデータを特定することを目的に、種々の聞き取り調査およびフォーカスグループディスカッションを開催した。この目的のために会議を開催した関連機関は、NFA、マケレレ大学、NEMA、DWRM および土地住宅・都市開発省などである。

協議を通して、1) 過去の援助プロジェクトで種々の GIS データが存在すること、また 2) それらは湿地管理のために有益となると考えられた。そのためこれら関連データを入手し、NWIS に取り込むこととした。その結果、次の表に示すように新たなマップレイヤとして、河川、道路、行政界、学校、病院、土壌資源、土地被覆及び給水施設の場所などの情報を取り込んだ。

表 2-1 NW-GIS に新たに加えられた情報

既存データと事業実施に伴い新たに入手したデータ	
Wetland (1994)	Polygon layer as a result of satellite image analysis in 1994
Administrative Boundary	Administrative boundary polygons, such as district, county, sub county, and parish updated based on the data of Uganda Bureau of Statistics (UBOS)
Wetland (2008)	Polygon layer as a result of satellite image analysis in 2008
Wetland Section Observation	NWIS Section survey sites based on UTM XY coordinates
Wetland Monitoring Site	NWIS Monitoring survey sites based on UTM XY coordinates
Hydrograph (River)	River polylines from the data of Water Resources Department.
Hydrology (Lake)	Lake polygons from the data of Surveys and Mapping Department.
Road Network	Road Network polylines from NFA (1996), UNRA (2012), JICA Study Team (2012), and UBOS.
Protected Area	Protected Area, such as National Park, Wildlife Reserve, Hunting Area and so on polygons from Uganda Wildlife Authority (UWA)
Educational Institute	21,484 school points from UBOS
Health Centre (Hospital)	1,700 hospital points from UBOS
Trading Centre	2,869 trading centre points from UBOS
Local Government H/Q Town	Points of local government headquarter and town from MoLG
Soil Map	Soil map on the basis of FAO World reference base for soil resources for the two wetland systems
Land Cover Map	Land cover map available from National Forest Authority
Water Supply	Water Resource Directorate Information on location of boreholes

1.2 データベース・レビューと再設計

NWIS データベースは、1) 特に NWIS と呼ばれる Microsoft Access および 2) NW-GIS と呼ばれるマッピングアプリケーションソフトウェアである ArcGIS の 2 つの基本的なソフトウェアパッケージから構成されており、これらが総称して国家湿地情報システム (NWIS) と呼ばれている。

2 つの重要な問題: データベースをレビューした結果、NWIS には 2 つの重要な問題があることが確認された。すなわち 1) ArcGIS のライセンスの期限切れ、および 2) アップグレードしたソフトウェアの VBA インターフェースの不適合性の 2 点である。

ArcGIS ライセンスの期限切れ: 2 つの ArcGIS ArcView と 1 つの Spatial Analyst のソフトウェアが存在するが、それらのライセンス契約が期限切れとなっており、ESRI 社(ArcGIS のサプライヤー)による保守サービスが利用できない状態であった。

アップグレードしたソフトウェアの VBA インターフェースの不適合性: VBA (Visual Basic for Applications) を使用して開発されているユーザーインターフェースは、MS Access および ArcGIS の二つのパッケージを接続し、データ交換、プレゼンテーションなどのプロセス自動化などで重要な機能を果たしている。上記ソフトウェアをアップグレードし検証の結果、これらインターフェースが機能しなくなっていることが確認された。また、ArcGIS 10.0 以降では VBA がサポートされないが、10.1 までは、無償のライセンスを取得することによって利用可能である。

上記問題の解決をはかり、NWIS が操作可能となった: 本プロジェクトでは、ArcGIS のライセンスは最新バージョンの ArcGIS V10.0 に更新し、VBA もプロジェクトで調達した新しいパソコンにインストールした。また、MS Access も最新バージョンである 2010 年版にアップグレードした。NWIS のインターフェース処理の VBA プログラムを更新するにあたり、データベースのファイル形式は.mdb から.accdb へ変換された。ArcGIS10.0 は.mdb ファイル形式を認識することができるので、accdb 形式のファイルは mdb ファイルに変換し、ArcGIS の最新バージョンで認識できるように設定した。そのほか、NW-GIS とは別に保存されていた 2008 年版の湿地マップを、NW-GIS に統合した。図 2-1 にその復帰までの概要を示す。

ArcGIS では、Access の新しいファイルフォーマットを認識できない: NWIS は、もともと MS Access 2003 と ArcGIS V.9.0 で開発されている。MS Access 2003 は、mdb というファイル形式を採用しており、ArcGIS V.9.0 では問題なく稼動していたはずである。しかし、プロジェクトが始まる前に、これらソフトウェアは、MS Access 2007 と ArcGIS の V.9.2 にアップグレードされた。MS Access 2007 では、mdb ではなく、新たに.accdb というファイル形式を採用しており、これは ArcGIS では認識することができないため、形式をダウングレードさせて対応した。

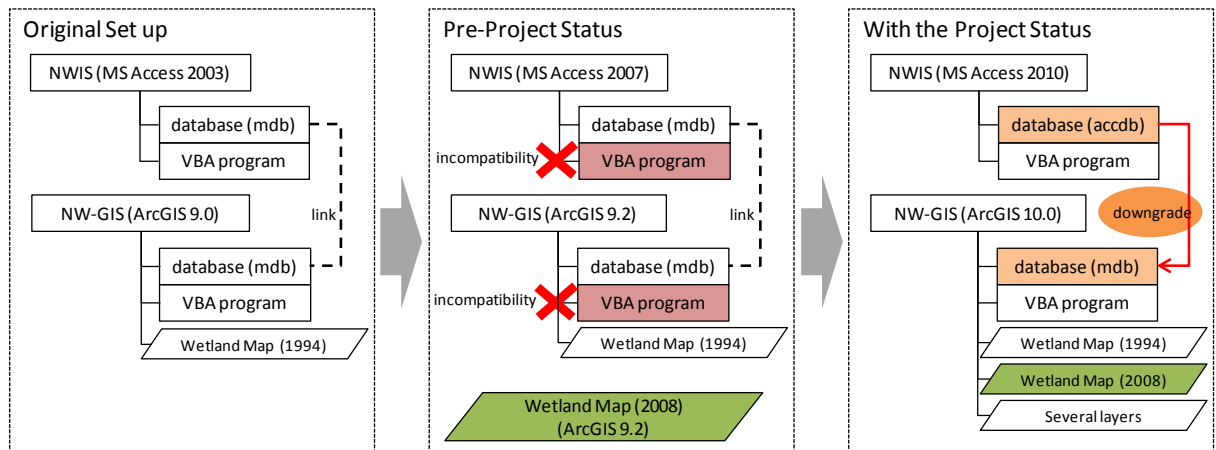


図 2-1 NWIS の過去と復帰

NWIS はプロジェクトにより完全に回復: NWIS は上記の基礎的な作業の後、さらに調整を経て、完全に運用できるようになった。具体的には、この段階で 1) NWIS データベース上のデータ入力や検索機能の間のリンクを修正し、データベース内のエラーや不整合を修正した。さらに、2) 2008 年に衛星画像の解析によって作成された湿地レイヤを、NW-GIS に統合し、1994 年作成の湿地レイヤと比較して表示できるように修正を施した。収集し、利用可能となったほかのマップレイヤは、表 2-1 に示したとおりであり、いずれも NW-GIS に統合した。さらに、ライセンス保守サービスを契約し、技術サポートとソフトウェアの無料更新のサービスを受けることができるようになった。

他の組織からのアクセシビリティを高めるため NWIS の再設計: 関係機関が NWIS にアクセスできるように再設計する必要があった。当初は、サーバを利用することを検討していたが、持続可能性および財務的能力を考慮の上で、1) 湿地のマップレイヤはウェブマッピングサービスを経由して他の組織からアクセスできるように設計し、2) 湿地管理局と県事務所の間では、ウェブ上のファイルのホスティングサービス(クラウドストレージ、ファイルの同期およびクライアントソフトウェア)を利用して、湿地情報を段階的に共有できるようにする方向で検討を進めた。従って、NWIS の外部ユーザーは、GIS ソフトウェアを持っていない人でさえ、公表された情報にアクセスが可能となる。NWIS のポリゴンデータは、KMZ 形式に変換した後に公開することとした。そのためユーザーはグーグルアースと ArcGIS オンラインの双方で情報を利用することが可能となった。

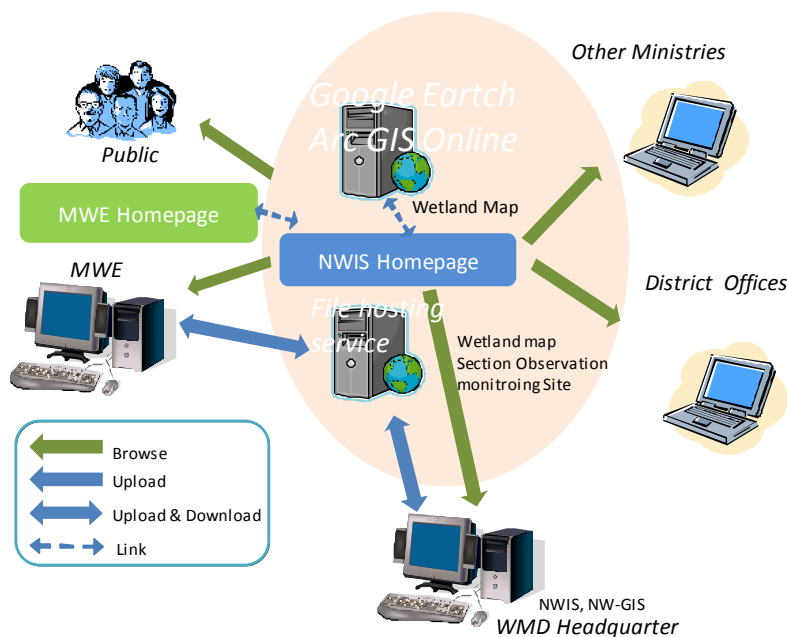


図 2-2 NWIS の情報発信の概要

これは、グーグルアースが広く利用されている実態を考慮したものである。一方、アクセスデータは、クラウドストレージ・ファイルの同期およびクライアントソフトウェアを提供するファイルホスティングサービスである「ドロップボックス」を使用することとした。県職員は、Access 形式のデータよりも Excel 形式のほうがなじみがあることを考慮し、新たに開発したツールを使用して Excel に変換したデータとして公開することとした。

湿地管理局は、NWIS のウェブサイトを設置した。ユーザーは、このホームページ上で、湿地の領域データ（ポリゴン）とその主な属性情報である Cover Type を含むマップデータのオンライン表示およびマップデータのダウンロードが可能となっている。また、Section Observation や Monitoring Site といった調査結果の情報をエクセルデータとしてダウンロードできる。本ウェブサイトは、当初、ドロップボックスを利用して作成されたが、ドロップボックスの方針変更に伴いウェブサイトに HTML ファイルを掲載できなくなったため、ウガンダのホスティングサービスを使うこととなった。

1.3 ソフトウェア及びハードウェアの調達

NWIS が機能するようにソフトウェアを調達：既存の 2 つの ArcGIS ライセンスおよび Spatial Analyst のライセンス 1 つを更新し、さらに 2 年間の保守サービス契約をおこなった。また、VBA のプログラムも更新し、その NWIS が MS Access 2010 と ArcGIS10 上で完全に動作することを確認した。

表 2-2 調達したソフトウェア

内容	ライセンス数
MS Office Professional 2010	5
ESRI ArcGIS for Desktop Basic (formerly ArcView) 10.0 Single Use	2
ESRI ArcGIS Spatial Analyst for Desktop Single Use	1
VBA for ArcGIS	2

表 2-3 契約した保守サービス

内容	数量	サービス期間
ArcView Primary License Maintenance	1	2 years
ArcView Secondary License Maintenance	1	2 years
Maintenance for Spatial Analyst Extension	1	2 years

NWIS が機能するようハードウェアを調達: NWIS が最適な環境で稼動するために必要となるハードウェア一式を検討し、その仕様を決定した。JICA ウガンダ事務所はその後、仕様に従ってコンピュータとプリンタを調達した。なお、作業の実務面を考慮の上で、調達は、改正後 NWIS の動作を確保するために 2012 年 3 月に行った。

表 2-4 調達したハードウェア一式

機材	商品名	数量	仕様
デスクトップ コンピューター	DELL Optiplex 780	2	CPU: Pentium Dual Core 3.20 GHz RAM: 2.0 GB HDD: 463 GB OS: Windows 7 Professional 64 bit type
ラップトップ コンピューター	DELL Vostro	3	CPU: Pentium Dual Core 3.20 GHz RAM: 2.0 GB HDD: 463 GB OS: Windows 7 Professional 64 bit type
プリンタ	Canon iR-ADV C2020/C2020F color laser	1	Colour Digital Multifunction Imaging System Letter Up to 20/20 ppm Legal Up to 15 ppm Ledger Up to 15 ppm Magnification 25% - 400% (1% Increments)
	Canon imageRUNNER 2525 monochrome laser	1	Desktop (Reader Combined + Inner Output) Magnification 25% to 400% (1% increment) Maximum Original Size Max. A3 / 11" x 17" Copy / Print Speed 25ppm Resolution Reading: 600 x 600dpi Writing: 1200 x 1200dpi

2 つの湿地システム内の県事務所のためにハードウェアを調達: 2 つの湿地システム内の 20 県のためにハードウェア 1 式を調達した。機材選定に当たっては、フィールド調査の際に GPS 付カメラで位置情報を記録し、画像やレポートを湿地管理局に送信できるように県職員に対し、ラップトップコンピューター、カメラ付 GPS を供与し、事務所からインターネットを利用できるよう検討した。また、コンピュータのウィルス対策ソフトも供与することとした。なお、モデムについては、インターネット接続状況が地区ごとに大幅に異なるため、県ごとにそれぞれ適切なサービスプロバイダを選択できるよう配慮した。

表 2-5 県事務所へ提供したハードウェア一式

機材	商品名	数量	仕様
カメラ付 GPS	Garmin GPS MAP 62sc	20	Handheld navigator with a 3-axis tilt-compensated compass with a 5 megapixel autofocus camera. Waterproof
ラップトップコンピュータ	Dell Inspiron 3521 Kaspersky Antivirus MS Office Professional WINDOWS 7	20	Intel Core i3 1.5 Ghz, HD 500Gb Ram 4Gb USB Port
電圧調整機	INV-3855/13	20	5 KVA
インターネットモデム	6 MTN 8 Orange 6 AIRTEL	20	Internet modems

1.4 インベントリーの様式作成

インベントリーの様式は成果 2 の下で詳細湿地評価の活動の一環として、作成変更を行った。生態系評価のための新しい様式はブラウン-ブランの植物社会学的アプローチを用いて、植生の記載を含めることとし、その書式を 2012 年 11 月に作成した。データベースに取り込むことができるよう、集計フォーマットも設計した。

1.5 湿地情報データベースの試行運用

NWIS の適用試験は 2 段階で行った。すなわち Stand-alone 型 PC での試行とホームページ上での NWIS の試行である。

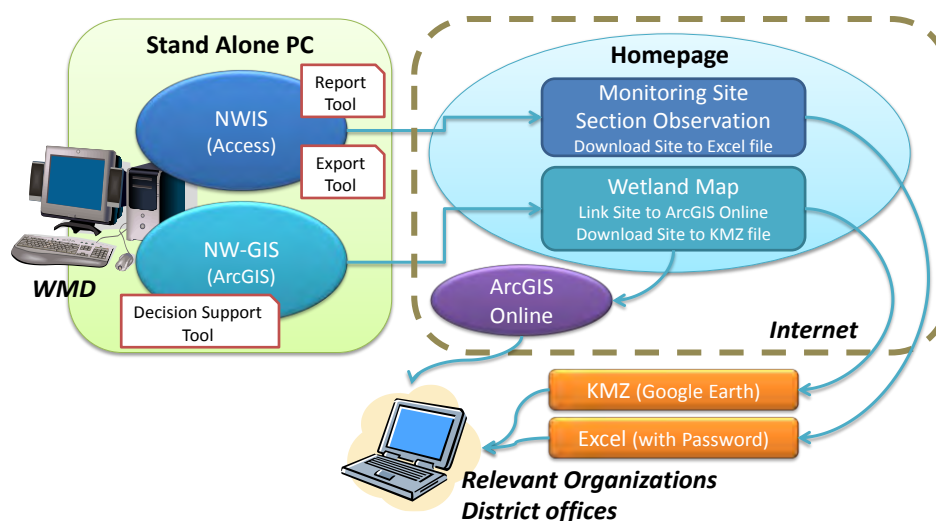


図 2-3 NWIS の試行

第1段階：Stand-alone 型 PC での試行：Stand-alone 型 PC でのテストは、試験プログラムの設計、見直し、協議およびプログラムの修正など、まさにトライアルアンドエラーの繰り返しであった。本プロジェクトでは、既に述べたように NWIS のさらなるカスタマイズを最小限に留めるという基本原則を踏襲しつつ、WMD の多様なニーズに対応する必要がある、プロジェクトの進捗により新たな課題に取り組みつつ、試行を繰り返すこととなった。このうち ArcGIS に基づく NW-GIS では、湿地のポリゴンレイヤ、Section Observation、Monitoring Site の各調査地点ポイントレイヤなど位置情報をマップ表示させていることに特徴がある。同様に、成果 2 の内容は、位置情報と属性情報によって NW-GIS に登録された。

第2段階：ホームページ上での NWIS の試行：NWIS ホームページの試行もネットを介して行った。当初は、ArcGIS Online サービスを経由して湿地マップを表示することが唯一の情報発信のチャンネルと想定していたが、ArcGIS のオンライン接続は、湿地マップを表示する速度が遅かったり、あるいは不可能であるなどの問題が時には発生することもあった。このような状況は、地方からアクセスした場合、いっそう多くあるだろうと考えられ、それ以外の方法でも情報の提供を考えるべきと判断した。その結果、上記のように KMZ 形式でデータをダウンロードできるように設計し、県職員の利用促進を図ることとした。

1.6 湿地情報データベースに係る研修

OJT 研修概要（基礎）：以前の NWIS で提供されていたユーザー・インターフェースは、操作を容易にしていたと考えられる。しかし、インターフェースの利用は、簡便性である反面、利用者はデータ自体を理解せず、またデータテーブルの関連性を理解せずに分析を行う傾向になる。データベースの構造全体を把握し、NWIS および NW-GIS の理解を深めることができれば、データ解析の柔軟性が高まり、トラブルシューティングの能力も高まると期待され、プロジェクトの持続可能性を高めることができる。このような背景で、研修は、主に以下2点について内容を検討して行った。すなわち1) ArcGIS と MS Access のデフォルトのコマンドによってデータ処理を行えるようすること、2) NWIS のデータテーブルと、各テーブルの構造・関連を理解できるようにすること、の2点である。また、本研修は、NWIS から必要なデータを抽出し、ArcGIS のレイヤとして、それらを登録することができるようになることを目指した。こうしてデータベース自体を理解し、ソフトウェアの動作のデフォルトのコマンドに関する研修を2012年5月から12月に湿地管理局の職員を対象にして開催した。これは GIS の基礎からスタートし、データ作成、データベース・ソフトウェアの操作と理解を含むように次第に拡張していった。

表 2-6 NWIS/NWIS-GIS に関する研修の内容

類型	内容
GIS の基礎	Mapping & Database, Vector data, Attribute Table, Coordinate System, Raster data (DEM, Satellite image), Thematic Map, GIS および CAD
GIS の応用 (NW-GIS 利用)	SQL (Select by Attribute), Zoom to Selected Feature, Measure Distance, Editor tool, Import Excel data, Display XY Data, Import / Export Google Earth kmz file, Spatial Adjustment tool, Map Layout, Creating Thematic Map
MS Access の基礎 s	Open Table, Data View / Design View of Table, Relationships, Primary Key
MS Access の応用 (NWIS 利用)	マニュアル Operation of NWIS database tables, Split NWIS data tables, Relationships in NWIS, Add Relationship, Run Query, Export Query table to Excel,

ポイントレイヤ作成手順に関する研修 (応用) : NWIS の利用者は、位置情報表を本体データ表に追加する手順を学ぶことにより、属性テーブルとしてデータディレクトリーを閲覧することが可能となる。OJT により以下課題の研修を行った。1) NWIS 内の関連づけられた表の内容を確認の上、MS アクセスを利用して必要な表、位置情報、本体情報および凡例などの情報を抽出する。2) MS アクセスにおいて SQL あるいは ArcGIS のツール(Add Join)を利用して位置情報を本体データに関連づける。3) 関連づけた表をポイントレイヤとして ArcGIS に移し、異なる名称でファイルを保管する。

持続性確保のための研修 : GIS ソフトウェアの維持は、湿地管理局にとっては、追加的な予算確保が必要となり、それが困難な場合もあることは厳然たる事実である。そのため地理情報を活用するための代替手段の導入を図ることとした。2016 年の日本における研修では、ArcGIS に加え、QGIS も利用できるように技術指導を行った。これにより必要に応じて2つのソフトウェアを利用することが可能となった。

2.2 成果 2 対象とする湿地システムにおける科学的情報の整備と利用

2.1 既存情報のレビュー

成果 1 の関連活動 (活動 1.1) と連携して、あるいは成果 2 として独立して実施した。表 2-1 に示したよう種々の GIS データを収集したが、そのうち土壌図は、プロジェクトの方向性を検討する上で、特に重要な情報となる。

2.2 湿地調査チームの形成

2011 年に実施したプロジェクト準備調査では、湿地の詳細評価は、湿地担当官がリーダーとなる学際的なチームひとつによって実施されると想定していた。しかし、作業計画を作成した結果、チームは県ごとに編成し、それぞれ異なるタイミングで実施することが妥当と判断され

た。実務上、チーム形成は生態系評価のために1チーム組織され、生計評価の目的のために別チームを構成し、いずれも各県の湿地担当官が主導するように設計した。それ以外については表 2-7 に示した通りである。

表 2-7 湿地調査チームの形成

サブプロジェクト	概要	チーム編成	メンバー
1 生態系評価	チームは県ごとに組織した。各チームは、湿地管理の県職員が率い、技術的にはWMD職員がサポートした。JICA TATはWMD職員の方法論上の技能訓練を行った。	県： WMD: JICA:	環境担当官あるいは湿地担当官 Afai Silvano Kabaalu Deo (Ituka Gibbs Gilbert) 中条弘義
2 湿地利用と生計評価	チームは湿地管理担当の県職員が率いて県ごとに組織された。郡の担当者は、各サイトで評価に参加した。技術支援はJICA TATによって行われた。しかしKibuku、Bududa、PallisaとManafwaは、Budaka県の職員が支援を行った。また、Nakapiripirit、KapchorwaとKweenにおける評価はBukedeaのS/Cフォーカルパーソンが支援した。	県： S/C: JICA:	環境担当官あるいは湿地担当官 担当官 村松康彦 ■ Kijali Cyprian Kamwada は、Kibuku、Bududa、PallisaおよびManafwaの調査を支援。 ■ Omuya Peter が、Nakapiripirit、KapchorwaおよびKweenを支援
3 洪水調整機能評価	評価は最初にJICA TATの森下によってサポートされ、KymbaddeRichardによってレビューされた。	県: JICA:	Kymbadde Richard 森下甲子弘
4 土壌流亡に係る初期評価	国立農業研究所 Kawanda 農業試験場によって行われた。	国立農業研究所 Kawanda 農業試験場	
5 土砂堆積のモニタリング	チームはKymbadde Richardが率い、村松が支援を行った。各サイトでは、村人たちも参加し適切なモニタリングサイトの選定に貢献した。	WMD: Subcounty: JICA:	Kymbadde Richard Focal Persons 村松康彦 農家も参加した。
6 水質評価	MWEの水資源管理総局水質管理部門によって行われた。	MWE水資源管理総局水質管理部	
7 農村バイオマスエネルギー評価	クミ県の湿地管理担当職員がチームを率いた。	県: WMD: JICA:	Okalang Emmanuel Afai Silvano Gokaka Geoffrey 中条弘義
8 政策評価	WMD、県が、フェーズ2のコミュニティレベルの活動の際に利害関係者と協力して実施する。	計画策定に関わる職員	

2.3 実施計画の作成

実施計画の作成は以下の3つの過程を経て作成した。すなわち1) 2012年4月23日から27日に実施した予備調査、2) 湿地管理上の主要な問題を特定するために、バレとソロチで2012年6月6日および6月8日に開催したワークショップ(なお県湿地担当官に加え、農業、林業、漁業担当官も参集した。)、さらに3) ワークショップの結果を検証するために2012年6月19日から6月29日までの日程で実施した現地踏査の3段階である。

実施計画は、さらに、2012年11月20日から30日にかけて実施したフォローアップ調査を経て、合計で8つのサブプロジェクトからなる評価計画として構成した。なお、8つ目の調査項目とした政策評価をあげていたが、本評価活動は、その後、プロジェクトの「成果5: 湿地

関連活動が調和される。」として取り込んだ。その内容については、2.5 成果5 湿地関連活動の調和に示した通りである。それ以外の7つの調査項目を以下に示した。

1. 生態系評価
2. 湿地利用と生計評価
3. 洪水調整機能評価
4. 土壌流亡に係る初期評価
5. 土砂堆積のモニタリング
6. 水質評価
7. 農村バイオマスイエネルギー評価

2.4 湿地調査の実施

調査に参加する職員に研修を行った後、2012年12月より湿地調査を実施した。その概要を表2-8に示した。

表 2-8 湿地評価のためのサブプロジェクトのインベントリ

ID	サブプロジェクト	概要
1	生態系評価	湿地の生態系評価として植物相の記載にあたっては、主にブラウン-ブランの植物社会的アプローチを適用した。本手法は、費用対効果が高く、柔軟かつ容易な手法である。また、植生分類、希少種評価、植生への影響評価に際して、生態学専門家の間でも広く受け入れられている。本調査のサンプルプロットは現地踏査に加え、衛星画像も活用して選定している。ルルベと呼ばれるプロットの分析をすることで、農業、放牧、土砂堆積に起因する人為的な影響を比較することを想定した。また、鳥、魚、底生無脊椎動物、水質や土壌の補完的な調査を、政府機関や NGO と共同で実施した。
2	湿地利用と生計評価	本評価は、湿地利用に係る課題把握と解決策を検討するための参加型調査である。資源マッピング、湿地利用に係る歴史的検討をコミュニティと共に実施した。また、湿地タイプと利用方法の関係についても確認し、さらに聞き取り調査により各土地利用の経済価値の定量化に努めた。これらの調査結果は、生態系評価の結果分析に応用され、NWIS に導入し、さらに湿地システム管理計画策定に反映した。
3	洪水調整機能評価	本評価は、過去の河川流量の分析に基づいて、湿地の洪水調整機能を評価し、代替法により金銭的価値に換算することを目的としている。水文学的な分析を行うための主要な前提条件は、特に 1) 機能している観測所が上流と下流とでそれぞれ最低 1 箇所ある。2) 上記 2 つの観測所の間に湿地が広く分布している。3) 過去の観測データが信頼に足るものである。
4	土壌流亡に係る初期評価	本評価は、土壌流亡の評価で広く用いられている USLE を用いて、土壌浸食の危険ゾーンを特定し、各サブ流域の発生土砂量を推定することを目標としている。砂防活動は、将来、湿地保全活動の一つになる可能性も有している。但し、本プロジェクトでは、パイロット活動の実施は、湿地内での活動に主眼をおいたものと想定されていることに注意が必要である。そのため、本サブプロジェクトは、予備的評価にとどまっている。農研機構の Kawanda 農業研究所が、本活動に取り組む予定となっている。
5	土砂堆積のモニタリング	Mt.Elgon と Opeta 湖の間にある広大な湿地は土砂の貯留機能を有しており、この湿地が下流のラムサール湿地を保全するために重要な働きをしていることを検証した。
6	水質評価	水質評価は、3 つのテーマが含まれており、異なるサンプリング設計が必要になる。テーマは 1) 土砂堆積および水田持続可能性、2) 既存の計測ステーションで行う土壌流亡調査、3) Opeta と Bisina における栄養塩類調査の 3 つである。
7	農村バイオマスイエネルギー評価	クミ県の Tisai 島からは、現在、クミ県周辺への重要な薪炭林出荷拠点となっている。Tisai 島は、一方で、砂質の Arenosls が主要な土壌であり、森林の伐採で一旦表土が露出すれば、著しい土壌流亡に曝され、Opeta 湖の生態に著しい影響を与えられと考えられる。そこで、島の森林資源の簡易評価し、Tisai 島が薪炭林供給拠点としてあと何年持続することが可能かを評価することを目的としている。

2.5 湿地インベントリーを更新、データ入力

評価が完了したところから、湿地インベントリーを更新し、新たに得られたデータを入力した。

2.6 意思決定支援ツールの設計

意思決定支援システム、あるいは意思決定支援ツールは、任意の地域から情報を抽出し、望ましい管理手法を示すことができるように開発された。本ツールを利用して、1) 湿地内に分布する土壌タイプ、2) NWIS で採用されている湿地類型、3) カンパラマトリックスを組み合わせることによって、管理手法のオプションがしめされるように設計した。

湿地内に分布する土壌タイプ: 湿地内には、ヒストソル、グライソルおよびバーティソルが主要な土壌タイプとして認められる。これら土壌タイプは、表 2-9 に示したように、それぞれ特有の科学的、生物的、物理的特性を有しており、それぞれ管理手法を導くことが可能である。詳しい情報を添付資料 6 に示した。

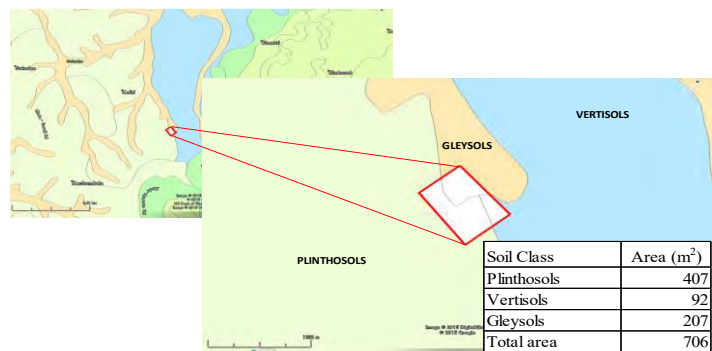


図 2-4 意思決定システムの概念図

表 2-9 主要な土壌タイプの特性と管理手法

土壌タイプ	一般特性	一般管理手法
ヒストソル	ヒストソルは、有機質の土壌で、ウガンダでは、パピルス、葦類、スゲなどが繁茂する低地に見出すことができる。	不安定な泥炭性の土地は、固有の価値があり、持続的な農業利用は困難であるため、原則として保全することが望ましい。
グライソル	グライソルは、1年のうち長い期間、地下水位に飽和された結果、土壌断面にグライ化作用によるグライ層をもつ土壌である。グライ層は、赤色、褐色あるいは黄色の沈殿が土壌断面の表面に観察され、集合体（ペット）の内部には灰色あるいは青色に変色している。	表流水が管理できる条件では、しばしば水田に利用され、上流域からの塩基の共有により比較的肥沃な性質を有する。
バーティソル	バーティソルは、重粘質土で、膨張と収縮を繰り返す粘土から構成されている。土壌が乾燥した時には、土壌表面から地下に向かって亀裂が生じる性質がある。	農業生産に大きな潜在的可能性を有している。但し、持続的な生産のためには適切な管理手法の適用が必要である。

出典: IUSS Working Group WRB. 2007. World Reference Base for Soil Resources 2006, first update 2007.

World Soil Resources Reports No. 103. FAO, Rome.

NWIS で採用されている湿地類型: ヒストソルは、通常、地下水位が高く、パピルスあるいは葦等が繁茂する地区に見いだされる。そのため土壌がヒストソルに類型され、その植生がパピルスに類型されているケースは、当該湿地は「脅威にさらされていない」と判断することができる。しかし、もし、NWIS の湿地類型として農地に類型されているならば、「破壊された」湿地と見なすことができよう。同様に草地に類型されているならば、湿地が排水されたことを意味し、それは「脅威にさらされている」と見なすことができよう。同様の法則を当てはめて、判断基準を表 2-10 に示した。

表 2-10 Soil Wetland Threat Matrix (Logical Design)

湿地類型 土壌	永続湿地						季節性湿地				
	Bush/ Palm/ Thicket (6p)	Grassland (7p)	Papyrus (8a)	Sedges (8b)	Farmland (9p)	Floating Vegetation (8c)	Woodland/ Forest/ Swamp (5s)	Bush/ Palm/ Thicket (6s)	Grassland (7s)	Farmland (9s)	Built-up (11)
ヒストソル	1	1	2	2	3	2	1/2	2	2	1/2	3
グライソル	1	2	2	2	1/2	2	1	2	2	1/2	3
パーティソル	1	2	2	2	1/2	2	2	2	2	1/2	3

注意: 表中 1 は、脅威にさらされていることを、2 は、脅威にさらされていないことを、また、3 は破壊されている湿地を示している。

出典: Classification of wetland adopted those used in NWIS.

カンパラマトリックス: カンパラマトリックスは、以下に示した通り、種々の管理手法に係る優先付けを示すためのものである。

表 2-11 カンパラマトリックス

		状態		
		脅威にさらされている	脅威にさらされていない	破壊されている
重要度	Vital	回復すべき	集中的にモニターすべき	回復すべき
	Valuable	賢明な利用を実施	モニターすべき	回復すべき
	Dispensable	賢明な利用を促進	モニターすべき	現時点では介入しない。

出典: 湿地管理局

2.7 ツールとデータベースのリンクと試行

意志決定システムは、デスクトップソフトウェアのための Esri ArcGIS 上で組み立てられ、湿地管理局の NWIS 管理を行っているデスクトップコンピューターに設置された。

2.3 成果3 対象とする湿地システム及び県における湿地管理計画の作成

3.1 湿地システム管理委員会の組織

本プロジェクトでは、現地での複数のワークショップ（WS）を経て対象地域と関係者を確認した。そして、アウォジャ及びナマタラ湿地システム管理計画の実施を担う実施委員会を県および湿地システム（県間）において確認・設置した。

各県の実施委員会は、首席行政官（CAO）、県湿地担当官（DWO）、県環境担当官（DEO）、計画担当官、コミュニティ開発担当官（DCDO）、都市部担当官、県協議会員、NGOで構成された。また、湿地システム委員も選出された。委員資格や管理規則については、その後の計画作成及び実施の段階で協議された。

3.2 既存管理計画のレビューと更新

ナマタラ湿地管理計画は、6県（Butaleja、Budaka、Mbale、Manafwa、Tororo、Pallisa）を対象範囲として、2008年に採択・開始された。5年後の2013年に同計画のレビューと改訂を行い、2県（Bududa、Kibuku）が加えられた。

レビューでは、現行計画の達成レベルについて県環境／湿地担当官（DEO/DWO）が質問して行った。質問票（例）は以下の通りである。

表 2-12 湿地管理計画レビュー質問票

課題	実施目的	主要活動	成果	責任者	達成度	
					1	2
全てのレベルで環境委員会が機能しない	注意喚起	研修を実施する	研修報告書	DWO/DEO	1	(達成した場合)いつ、どこで、誰が、どのように
	環境／湿地担当者を指名する	業務内容を確定する	担当者の業務内容	DEO/DWO	2	(達成されない場合)なぜ
		担当者に研修を行う	研修報告書			

2013年6月の第3回WSにおいて全ての県が質問票に回答し、その結果はレビューレポートにまとめられた。

レビューレポートは主要な結果だけでなく、関係者分析及び計画実施に影響を与えた要因についても報告している。過去5年間で湿地システムの利害関係者は、人口増加、経済成長、地

方分権化といったマクロな状況の変化を経験していることが分かった。また県によっては、莫大な努力と成果にもかかわらず、多くの課題が残っている。レビューのワークショップ参加者は、湿地システム計画が、湿地利用と保全について緩やかであるが継続的な改善を目指すプロセスであることを認識することができた。

なお、レビューレポートは、湿地システム管理計画から独立した別冊子として作成した。

3.3 優先課題の特定

湿地システム管理計画の策定過程で、コミュニティとの協議を通じて、湿地管理に係る課題の特定を行い、重要課題に対する対策の特定を行った。それらの課題と対応策を表 2-13、表 2-14 および表 2-15 にまとめた。

表 2-13 制度上の主な課題と対応案

ナマタラ湿地システム	
課題	対応案
<ul style="list-style-type: none"> 湿地資源利用者組織の不在／機能不全 湿地の境界と利用に関する内部的・対外的紛争 不適切な政治的関与・意思・技術コミットメント 不適切な湿地管理情報 Parish、郡、県、県間レベルの環境委員会の不活発 	<ul style="list-style-type: none"> ナマタラ 湿地資源に関するコミュニティ管理を促進する ナマタラ 湿地システムの重要性について関係者と公共の注意を喚起する ナマタラ 湿地資源の有効な管理のために環境委員会を強化する
アウォジャ湿地システム	
課題	対応案
<ul style="list-style-type: none"> 漁業資源管理に関する責任不在 家畜飼育者と耕作者間の湿地利用に関する紛争 河岸保全県の規制の不履行 湿地周辺住民の違法な土地利用 湿地立ち入り規制を行う郡担当官の不足 	<ul style="list-style-type: none"> 湿地資源管理において役割を担う資源利用者グループを形成・強化する 多様な湿地の課題に対処するための法令を施行する 湿地利用者にタイムリーで適切な普及指導を提供する

表 2-14 生物・物理に関する主な課題と対応案

ナマタラ湿地システム	
課題	対応案
<ul style="list-style-type: none"> 森林破壊 河岸の開拓 土壌侵食 湿地及び河川沈泥 洪水 Namatala 川の水位低下 河川水の汚染 河川に向かう耕地拡大 土手や土壌に影響を与える定住 生物多様性、特に魚、鳥、一部植生の損失 	<ul style="list-style-type: none"> 湿地及び川の土手の植生の回復を促進する 湿地の土壌と水の保全を推進する ナマタラ湿地システムの価値ある生物資源を保護し回復させる
アウォジャ湿地システム	
課題	対応案
<ul style="list-style-type: none"> 川の土手の土壌侵食 作物耕作のための河川沿い湿地の浸食 土壌侵食 湿地エリアの洪水 季節的な水不足 水質汚染；河川、ダム、その他水域での人的活動 森林被覆の減少 野鳥と野生動物の湿地での消滅 	<ul style="list-style-type: none"> 土壌と水の保全活動を推進する 回避・最小化・軽減原理を適用して水質を回復させる 地方の多様な課題と需要を考慮して生物資源を回復・保護する

表 2-15 社会経済に関する主な課題と対応案

ナマタラ湿地システム	
課題	対応案
<ul style="list-style-type: none"> • 穀物の低収量 • 湿地での過耕作 • 湿地資源の過剰な収奪 • 高い食料需要／人口過剰による食料不足 • 失業／代替経済活動の欠如 • 乏しい漁業と農業の手法 • 集水域での薪と用材の不足 • 湿地資源の所有に関する紛争 	<ul style="list-style-type: none"> • Doho - Namatala 湿地資源の持続可能な利用を促進する • 他分野と協力して様々な社会ニーズに対応する方策を計画・実施する
アウォジャ湿地システム	
課題	対応案
<ul style="list-style-type: none"> • 耕地拡大／湿地の無計画な利用を伴った、不適切な耕作方法と作物の選択 • エコツーリズム資源の未開発 • 土壌侵食その他の作用に曝された湿地の内部・周辺での過放牧 • 湿地に隣接する地域社会の生存手段としての無制限な漁業 • 野火の制御の欠如 	<ul style="list-style-type: none"> • 増大する食料と雇用へのニーズ対応及び保全と両立する、持続可能な湿地利用の実施を促進する • 他のセクターと協力して様々な社会ニーズに対応する方策を推進する

3.4 対応策の検討

湿地システム管理計画策定中のコミュニティ協議において、湿地管理にかかる課題が特定され、対応策が検討された。コミュニティ協議は2013年5月に、湿地に隣接する郡(sub-county)の庁舎で Parish の代表者と湿地利用者が参加して行われた。コミュニティ協議の主な結果は、課題ごとに対応案を検討して情報を整理した。その後、2013年の6月に各県環境・湿地担当官らとワークショップを開催し、協議した。これらは、1) 制度、2) 生物物理、3) 社会経済の分野別に、表 2-13、表 2-14 および表 2-15 にまとめた。

3.5 湿地システム管理計画作成

WMD では BTC (ベルギー) の支援を受けて既に4つの湿地管理計画を作成しており、その標準的な作成手順が確立していることを C/P から確認した。そのため、本プロジェクトでも基本的にその手順、手法を踏襲することとした。標準的な計画作成手順は以下の通りである。

- | | |
|-------------|------------------------------|
| [1] 湿地調査 | [6] コミュニティ協議 |
| [2] 対象地域の確定 | [7] 調査結果の総括と湿地システム管理計画ドラフト作成 |
| [3] 関係者確認 | [8] 湿地システム管理計画ドラフト発表 |
| [4] 現状調査 | [9] 湿地システム管理計画承認 |
| [5] 行政官研修 | |

上記手順に基づき、湿地管理局職員と JICA チームで協力し、湿地システムごとに以下のワークショップ（WS）及び現地レベルでの活動を実施した。WS 開催の間に、各県で関係者（郡、parish 等）への説明・協議を行った。

表 2-16 湿地システム管理計画作成のためのワークショップと現地活動

ワークショップ	ナマタラ湿地システム	アウオジャ湿地システム
第1回 WS 2013年3月開催	各県の環境・湿地担当官との事前協議： -関係者の確認 -対象地域（県・郡=Sub-county）の確認	
第2回 WS 2013年4月開催	各県関係者を招聘した管理計画策定プロセスおよびプロジェクト全般に関する説明	・各県関係者を招聘した管理計画策定プロセスおよびプロジェクト全般に関する説明 ・既存管理計画のレビュー：概要説明とコメント依頼、協議
啓発活動 “Sensitization” 2013年4月末実施	各県の環境・湿地担当官が郡関係者に計画策定とプロジェクト全般について説明	
第3回 WS（トレーニング） 2013年5月開催	・各県の環境・湿地担当官および郡の環境担当官を対象にコミュニティ協議の手順・方法およびパイロットプロジェクト選定基準について説明 ・Sub-county における実践的トレーニング（インタビュー）の実施	
コミュニティ協議 “Community consultation” 2013年5月実施	・各県の環境・湿地担当官と郡の環境担当官が Parish 関係者および湿地利用者を招集、湿地管理の問題点・原因・解決策について協議 ・コミュニティ協議レポート・パイロットプロジェクト提案書を作成	
第4回 WS 2013年6月開催	各県の環境・湿地担当官によるコミュニティ協議の結果およびパイロットプロジェクト（案）の発表	
第5回 WS 2013年7月開催	湿地システム管理計画ドラフト協議および承認プロセス確認 ・Goal, Vision, Objective, Action Plan 作成	湿地システム管理計画ドラフト協議および承認プロセス確認 ・既存管理計画のレビュー：Action Plan の実績評価 ・Goal, Vision, Objective, Action Plan 作成
第6回 WS 2013年9月開催	湿地システム管理計画ドラフト発表・配布	
2013年10月	湿地システム管理計画承認	

湿地システム管理計画の完成の後、ナマタラ湿地システムは2014年1月22日に、アウオジャ湿地システムは、同1月24日にそれぞれ正式に署名された。

3.6 パリッシュ代表者の参加を得て郡湿地管理計画を作成する

本プロジェクトは、11県における県湿地管理計画とそれに必要な郡湿地管理計画の作成を技術面・財政面から支援した。ただし、2湿地システムに含まれる残り9県についても管理計画作成支援ワークショップを開催することで、能力開発を図っている。

郡湿地管理計画の作成プロセスには、湿地管理に関わる全てのステークホルダーが積極的に参加し、盛んな協議が行われた。以下は、郡湿地管理計画の作成プロセスである。

- [1] 作成プロセスと参加者の確認
- [2] 郡湿地管理計画作成に係る職員の訓練

- [3] 郡における郡湿地管理計画策定ワークショップ(パリッシュ代表者との協議含む)
- [4] 郡湿地管理計画(仮)の作成
- [5] 郡議会による郡湿地管理計画の承認

上記プロセスに基づき WMD は種々のワークショップを開催し、下表に示した現地活動を実施した。のべ 124 郡で実施されたワークショップ (WS3) 中、県職員と郡の環境担当者がパリッシュの代表者(パリッシュ長、議長、環境担当書記、資源利用者等)や計画策定に関する他の郡職員らと可能な限り協議した。なお、WMD のカウンターパートは、県や郡職員に対するモニタリングや技術的アドバイスを提供する役割に徹した。

表 2-17 郡湿地管理計画策定のためのワークショップ

ワークショップ記号	対象県	主な内容	日月	場所	県政府の参加者	湿地管理局の参加者
WS 1	2つの湿地システムの20県	全体のオリエンテーションと日程確認のための導入	1月29日	Mbale	県環境/湿地担当官、他技術職員	Gokaka Geoffrey Matovu Robinah
			1月31日	Soroti		Gokaka Geoffrey Matovu Robinah
WS 2	2つの湿地システムの20県	県および郡職員に対する/郡湿地管理計画作成トレーニング	2月4日から3日間	Mbale	県環境/湿地担当官、他技術職員 郡環境フォーカルパーソン	Barugahare Vincent Gokaka Geoffrey Kabaalu Deo Matovu Robinah
			2月11日から3日間	Kumi		Barugahare Vincent Gokaka Geoffrey Kabaalu Deo Matovu Robinah
WS 3	パイロット活動のある11県	124郡における郡湿地管理計画作成のための計画ワークショップ	2月17日から4月1日まで、11県の郡において2日間ずつ	郡事務所	県環境/湿地担当官、他技術職員 郡環境フォーカルパーソン パリッシュ代表者	(モニタリング) Gokaka Geoffrey Kabaalu Deo

郡湿地管理計画は、基本的に以下の目次構成に沿っている。

第1章: 郡の概況

位置、湿地利用の歴史、人口、民族と言語、ジェンダー、土地利用/土地所有、気候/気候変動

第2章: 郡内の湿地

湿地リスト、ジェンダー別の現在の湿地利用状況

第3章: 郡内の湿地の問題と課題

問題分析、問題の優先順位付け

第4章: 郡湿地管理計画 (SWAP)

上位目標、目標、目的

第5章: 5ヶ年計画

活動、投入、アウトプット、対象地域、責任者、実施スケジュール、予算、資金源

124 郡全てが 2014 年 4 月末までに郡湿地管理計画を作成した。

3.7 県技術計画委員会を設置する

各県は、湿地管理は分野横断型のアプローチが必要という原則に則り、県環境/湿地担当官、県自然資源担当官、県農業担当官、県森林担当官、県漁業担当官、県コミュニティ開発担当官、県計画担当官および県副首席行政官(Deputy/Assistant CAO)らで構成する県湿地管理計画作成のための技術計画委員会を設置した。委員会は、各セクターにおいて湿地管理活動に継続して予算が割り当てられ持続的に実施されるように、質の高い県湿地管理計画を作成して県開発計画に反映されることを意図している。

3.8 県技術計画委員会が、その県の県湿地管理計画を作成する

県湿地管理計画は、郡湿地管理計画で特定されたニーズと優先順位に基づいて作成された。つまり、県内の全ての郡湿地管理計画は、調和を図りつつ県湿地管理計画に統合されたと言える。ワークショップでは、異なる郡の間の共通の湿地利用や問題/課題を特定し、また郡レベルでの計画では取り扱われなかった課題を確認しながら、郡湿地管理計画を分析、統合、要約することを目的としていた。各郡からの1名の環境担当者と県職員がワークショップに参加し、ニーズや課題が県湿地管理計画に包含されていることを確認した。

表 2-18 県湿地管理計画策定のためのワークショップ

ワークショップコード	対象県	主な内容	日月	場所	県政府の参加者	湿地管理局の参加者
WS 4	パイロット活動のある11県	11 県の県湿地管理計画を作成するために各県の全ての郡湿地管理計画を統合する	3月25日から5月中旬まで各県2日間	県事務所	県環境/湿地担当官、他技術職員 郡環境フォーカルパーソン	Gokaka Geoffrey Kabaalu Deo

県湿地管理計画は、基本的に以下の目次構成に沿っている。

第1章: 序論

背景、目的、手法、計画プロセス、湿地管理に係る法的・政策的・制度的枠組み

第2章: 湿地概要

全体的記述(位置、サイズ、人口)、物理的特徴、生態的特徴、社会経済的特徴

第3章: 問題と課題の特定

自然資源分析、問題分析と優先順位付け

第4章: 管理目標、目的、活動

上位目標、目的、5カ年計画

第5章: 実施戦略

実施体制/委員会、モニタリング・評価

3.8 各管理計画のレビュー・更新

関連計画は、ウガンダ国の計画策定の通常の手続きに従って5年ごとに見直しをする必要があるが、本プロジェクト期間中にも、湿地管理局の支援で、計画の一部見直しを行った。その概要を以下に示した。

第1回湿地システム管理計画実施委員会はAwoja湿地システムを対象として2015年11月12日に、Doho-Namatala湿地システムを対象として2015年11月19日に開催された。本会議は、委員会の活性化を主な狙いとし、加えて、国家湿地管理プロジェクトの進捗と課題を2つの湿地システムの関係職員へ情報提供するために開催されたものである。アウオジャ湿地システムの会議では、各県を代表する委員会メンバーやWMD、MAAIFなど、約110名の職員が参加した。プロジェクトの状況や課題が参加者によって発表、議論された。委員会メンバーの構成を見直す際には、メンバーは責任と透明性のある方法を通じて再指名されるべきであることが示唆され、参加者はメンバーについて議論した。ナマタラ湿地システムの会議では、Mbale市が実施委員会のメンバーとして追加で任命された。会議の参加者は、Inter-district FMP 実施委員会のメンバーによって解決されるべき問題として、次の課題を挙げている。

- 1) アウオジャ湿地システムではビシナ湖沿岸の Katakwi, Soroti, Ngora and Kumi 県、Doho Namatala 湿地システムでは Pallisa, Budaka および Mbale 県など県境を跨いだ課題の解決に必要である。
- 2) ウガンダ中央部・東部地域灌漑地区開発計画プロジェクトおよび GIZ 支援の 流域管理計画など関連事業が平行して進められている。
- 3) 2016 年暮れには JICA による支援も完了する。それまでに FMP の実施委員会の支援を確かなものにする必要がある。

2016年には、2つの湿地システムでそれぞれ2回の会議を開催した。第1回目の会議は、2016年の5月26日にアウオジャ湿地システムにおいて、同5月27日にはナマタラ湿地システムにて、湿地システム管理計画の実施状況、特に本プロジェクトで支援しているパイロット活動の進捗について、NWISを利用した解決方法を検討し、生態モニタリング実施時の役割分担、チョガ水資源事務所との連携について協議した。

第2回目の会議は、アウオジャ湿地システムは10月25日および26日に、ナマタラ湿地システムは10月27日および28日に開催した。いずれの会議も現場踏査の後に会議を開催した。

2.4 成果4 コミュニティ湿地管理計画に基づいたパイロット活動の実施

4.1 パイロットサイトの選定

パイロットサイトの選定に際しては、1) 湿地の状況と、2) 投資機会の二つの側面を考慮した。所得創出活動なしでは、いかなる湿地管理活動も住民から支持を得られず、持続性を確保できないと考えたからである。そのため本プロジェクトでは、湿地管理を強化するために市場主導型のアプローチを採用することとした。湿地の状況については、まず脅威のレベルを指標として採用した。しかし、本プロジェクトでは、カンパラマトリックスに基づいて重要かつ危険に曝されている湿地を優先するという基本原則を踏襲するものの、県職員および郡職員の判断の自由度を高め幅広い裁量権をもたせることによって彼らの経験と知識を最大限活用することとした。投資機会については、以下の主要な基準を適用した。すなわち 1) プロジェクト参加者のオーナーシップの意識、2) 本プロジェクトの設計あるいはワイズ・ユーズコンセプトと整合性があること、3) 財務的実行可能性、4) 技術的な実現可能性、および 5) 環境への影響の5つである。選定に活用した優先基準を添付資料7に示した。

選定に先立って、トレーニングワークショップを開催し、彼らが上記基準に基づいて事業の形成・優先付けができるように支援した。彼らは最終的にナマタラ湿地システムの16サイトとアウオジャ湿地システムの31サイトを選定した。

上述プロジェクトサイトのリスト（ロングリスト）から、さらに優先順位付けをワークショップにより行った。その段階で、共通事業、類似事業あるいは重複事業は除外した。案件熟度が低いものも不採用とした。その結果、ナマタラにおいては6つのプロジェクトサイトとアウオジャ湿地システムの5つのプロジェクトサイトを選択した。これらの案件形成は、この時点では、まだ不十分であったため、本プロジェクトでは、提案されたアプローチの精査を進め、賢明な利用という概念が具体的な活動へと結びつくよう検討を進めた。なお、課題、アプローチおよび方法は、その後、繰り返し見直しを行っているため表2-19 および表2-20の記載事項は、その後、改定をしていることに注意する必要がある。

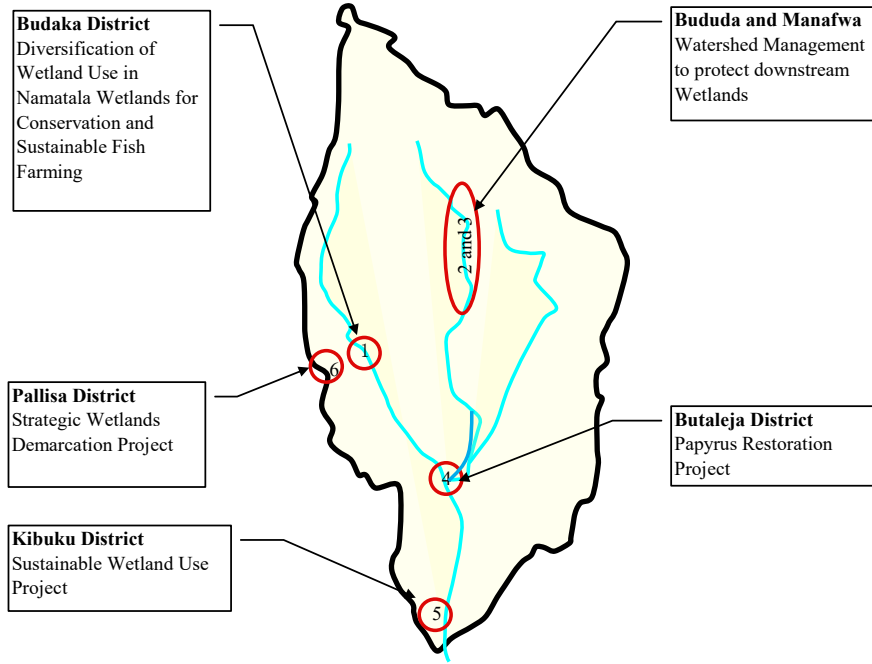


図 2-5 ナマタラ湿地システムのパイロットサイト

表 2-19 ナマタラ湿地システムのパイロット事業候補地

地域	事業名称案	概要
1 Budaka Kamonkoli S/c	Diversification of Wetland Use in Namatala Wetlands for Conservation and Sustainable Fish Farming	Namatala 川沿いの湿地ではコメ生産に過度に依存し、湿地生態系が著しい影響を受けている。湿地システム管理計画は、当該地域の湿地利用の多様化を図ることを方針として示している。水産養殖は、湿地利用者のビジョンを実現するための手段を提供するだろう。ニャンザ養殖組合は、水産養殖によって持続可能な生計を確保したいと考えており、本プロジェクトは、彼らが実施する湿地保全活動を支援する。
2 Bududa Bukigai S/C	Watershed Management to protect downstream Wetlands	Manafwa 川沿いの河岸侵食は下流の湿地に土砂堆積という深刻な問題をもたらしている。本プロジェクトは、土壌浸食の下流への影響を最小化するように河川沿いに保護区域設定することを支援する予定である。事業参加者は、川沿いの森林被覆率を高めるために育苗活動を行い、併せて乳牛とミツバチなど生計向上策についても検討する予定である。
3 Manafwa Kaato and Bwagogo	Watershed Management to protect downstream Wetlands	地域住民は、現在、農業生産のために河川堤防部位にまで農地を拡大している。その結果、下流の湿地に土砂堆積をもたらしている。プロジェクトは、ウガンダ政府の環境規制に基づいて保護区域設定する支援を行い、併せてアグロフォレストリーや養蜂などの代替生計手段を組み合わせることで収益基盤の強化を図るものである。
4 Butaleja Kachonga, Butaleja	Papyrus Restoration Project	適切な計画を経ずして水稲生産地域が拡大しており、重要な生態系であったパピルス植生が破壊されている。また、水稲への依存が高く市場変動の影響に曝されているという課題もある。本パイロット活動は、まずパピルス植生を復元することを主目的とするが、併せて住民の希望を鑑み、養魚生産の支援を行うことによって、収入の多様化を図り生計の安定を目指す。
5 Kibuku Kirika	Sustainable Wetland Use Project	当該地域では、水稲生産が主要な湿地利用形態であるが、その生産技術は適切なものではなく、湿地の持続的利用の便益を最適化している状況にはない。本パイロット事業では、米の生産や魚栽培など技術の組み合わせを検討し、適切な湿地利用について評価を行う。
6 Pallisa Kabwangasi	Strategic Wetlands Demarcation Project	本パイロット事業は、湿地の境界を定め、併せて生物多様性を保全するために適切な樹種の選定と植林を行い、養蜂も組み合わせることで総合的な湿地利用改善を目指す。

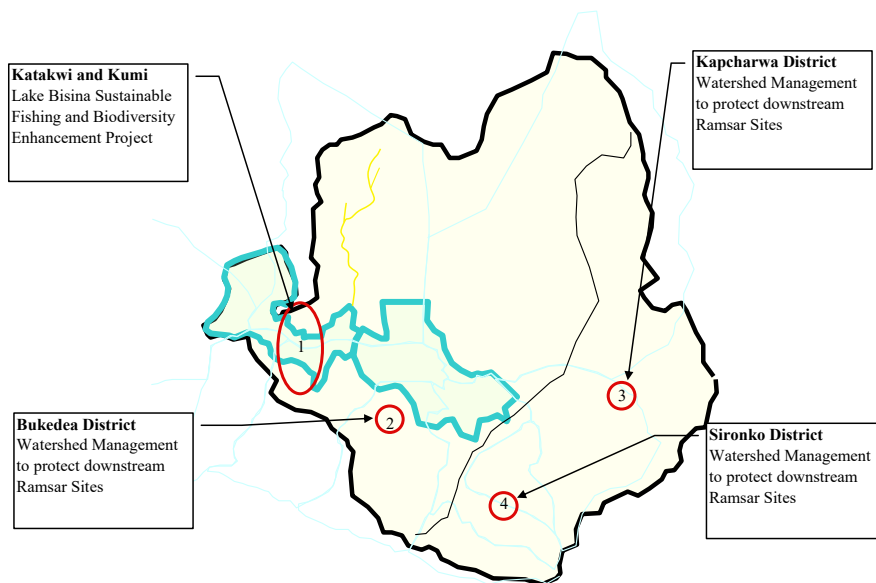


図 2-6 アウオジャ湿地システムのパイロットサイト

表 2-20 アウオジャ湿地システムのパイロット事業候補地

地域	事業名称案	概要
1 Bukedia Malera	Watershed Management to protect downstream Ramsar Sites	Bukedea 県は、貧栄養の Plinthosols として分類される土壌が卓越し、植生被覆率は他県に比べて低い。そのため湿地周辺において、土壌浸食リスクが高く、湿地利用に影響を及ぼしている。また、当該県の湿地は、上流から運ばれた土壌粒子を捕捉するなど重要な機能を果たしており、その保全是重要な課題である。本パイロット事業では植林の促進を図ることによって土壌浸食を最小限に留め、コミュニティの生産活動を支援するものである。
2 Kapchorwa Kaptanya	Watershed Management to protect downstream Ramsar Sites	Kapchorwa 県は、一般に肥沃な土壌である Nitisols が卓越しているが、作物生産のために河川近傍にまで農地が拡大し、下流の湿地に甚大な影響を及ぼしている。本パイロット事業は、植林を促進することによって保護ゾーンを設けることを支援し、生活改善のための代替生計手段についても検討する。
3 Katakwi Kapjan	Lake Bisina Sustainable Fishing and Biodiversity Enhancement Project	不適切な漁具の使用、湖沼沿岸部の無秩序な放牧による魚の産卵場所の破壊などにより、Bisina 湖の水産資源は枯渇しつつある。本パイロット事業は、湿地ユーザーと協力し、適切な漁網のサイズを検討し、網の規制、湿地の賢明な利用を促進するための漁業活動の監視や、ゾーニングの活動などを支援する。
4 Kumi Ongino	Lake Bisina Sustainable Fishing and Biodiversity Enhancement Project	
5 Sironko Bukise	Watershed Management to protect downstream Ramsar Sites	Sironko 県は土壌浸食の重要な発生源の一つと見なされ、下流の2つのラムサール湿地にも長期的な影響を及ぼす可能性を有している。本県においても農業目的で河川近傍地域が利用されている。本パイロットプロジェクトでは、灌漑用のポンプを導入し、園芸作物の支援を行うものである。

4.2 コミュニティ湿地計画・管理委員会を設置する

各コミュニティ湿地管理計画の策定初期に、参加型湿地管理計画チームを結成した。県職員が対象湿地に隣接する関係村やパリッシュから約 100 名を呼び、その中から重要な資源使用者を選ぶために、湿地利用に関する経験や関係を考慮しながらコミュニティを代表する 50 名を選んでいる。50 名の中には、少なくとも 3 名の中心メンバー、計画策定の促進を図る代表者、

県職員や湿地管理局の職員が含まれる。計画策定は、以下に示すトレーニングワークショップの後に実施された。

4.3 コミュニティ湿地計画・管理委員会とコミュニティ湿地管理計画を作成する

コミュニティ湿地管理計画を作成するため、Mbale(5月26日から)とKumi(6月9日から)においてそれぞれ6日間のトレーニングを実施した。これにより、参加者は湿地管理計画に関する知識と技術を習得した。トレーニングの内容は、総合的水資源管理、ジェンダー、気候変動、コンフリクトマネジメント、経済評価やステークホルダー分析等であった。参加者は、パイロットプロジェクトを実施する県の技術職員、パイロットプロジェクトが実施される郡から計2名、パイロットプロジェクトを実施しない県から1名という構成であった。その後、準備期間を経て、コミュニティ湿地管理計画は、次の7つのステップによって作成された。1) 予備調査、2) ステークホルダー分析、3) 自然資源分析、4) ビジョン・戦略策定、5) 実施体制構築、6) コミュニティ湿地管理計画文書作成、7) コミュニティ湿地管理計画の承認と署名。本プロジェクトで採用した計画策定手順は、添付資料8に示した。

4.4 生計向上技術の特定

持続的な生計向上手段は、まず活動4.1においてパイロットサイトを選定する段階で参加的な手順を踏んで特定されている。この段階で、既に活動が行われている地区を優先的に選定した。それ以外の地区は、コミュニティから提案された情報に基づいて選定を行った。こうして選定された生計向上手段は表2-21にまとめた。

表 2-21 生計向上技術

県	持続的生計向上手段	
Bududa	養蜂と販売	周辺地域で養蜂産品に対する需要が向上しているため収穫後処理技術の改善を図ることにより付加価値を高めて市場競争力を高める。
Manafwa	家畜生産支援	コミュニティのメンバーに75%ホルスタイン種の妊娠期間にある雌牛を提供した。通常3~5か月で出産し、次のメンバーに提供されることになる。
Butaleja	内水面漁業の促進	いずれも Mbale の消費者市場に比較的隣接する地域で、内水面漁業の生産支援を行った。
Pallisa		
Budaka		
Kibuku	水田実証圃場の設置	参加的な調査と意思決定を導入し、パピルス地区に隣接する地域で望ましい水田農業を行うための実証圃場を設けた。
Kapchorwa	植林	斜面地区の植林を促し、下流の湿地を保護する活動を支援した。
Sironko	園芸作物の生産	灌漑ポンプを提供し、高付加価値園芸作物の灌漑面積を拡大する支援を行った。
Katakwi	湖沼管理	漁業規定を施行できるよう漁協の支援を行った。

4.5 生計向上技術に係る住民への研修

いずれの地域も、1) 保護地区の創出と2) 生計向上活動の支援を行ったが、それぞれの地域特性を考慮の上で、活動支援を行った。

1) 保護地区の創出: 国家環境規定(湿地、河川および湖沼管理)2000 の第 29 条に原則として則り、コミュニティのメンバーは、保護地区を設置するための活動を行った。但し、河川堤防から保護地区末端までの距離は、各地の状況および現実的に湿地保護が促進できるかどうかという観点を考慮しながら、コミュニティのメンバーと協議をして決定した。さらに、その外周に、一定の活動のみが許可される地区(生態地区)も設定し。この湿地境界設定の活動概念を以下に示した。

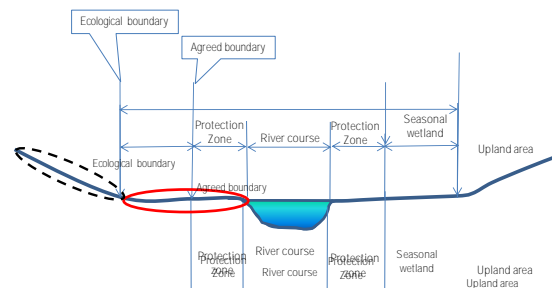


図 2-7 湿地境界設定の概念図 1

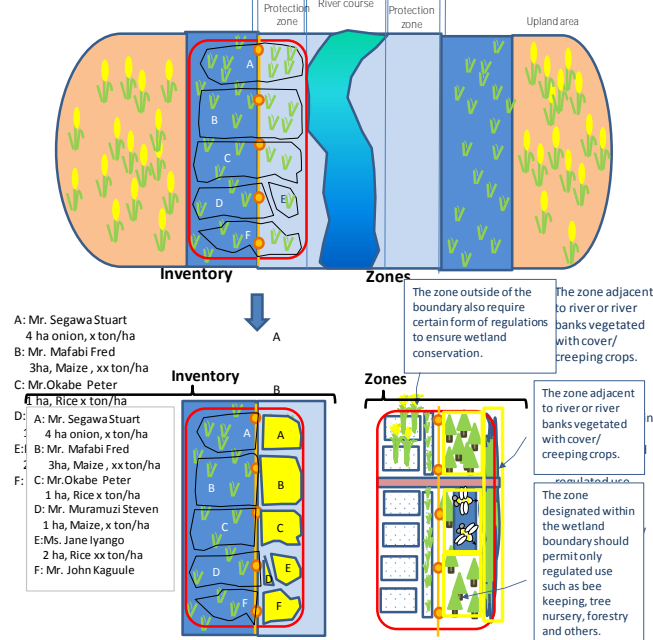


図 2-8 湿地境界設定の概念図 2

保護地区と生態地区の配置などは、実際には、地区ごとの状況を鑑みながら決定するため、それぞれ異なっている。この過程で県担当官は様々な情報を収集しており、1) GPS を利用して地区全体の位置情報、2) GPS を利用して境界線の位置情報、3) 各地区内で許可されるべき活動内容等がこれに含まれる。GPS を利用した境界設定の記録例を図 2-9 に示した。

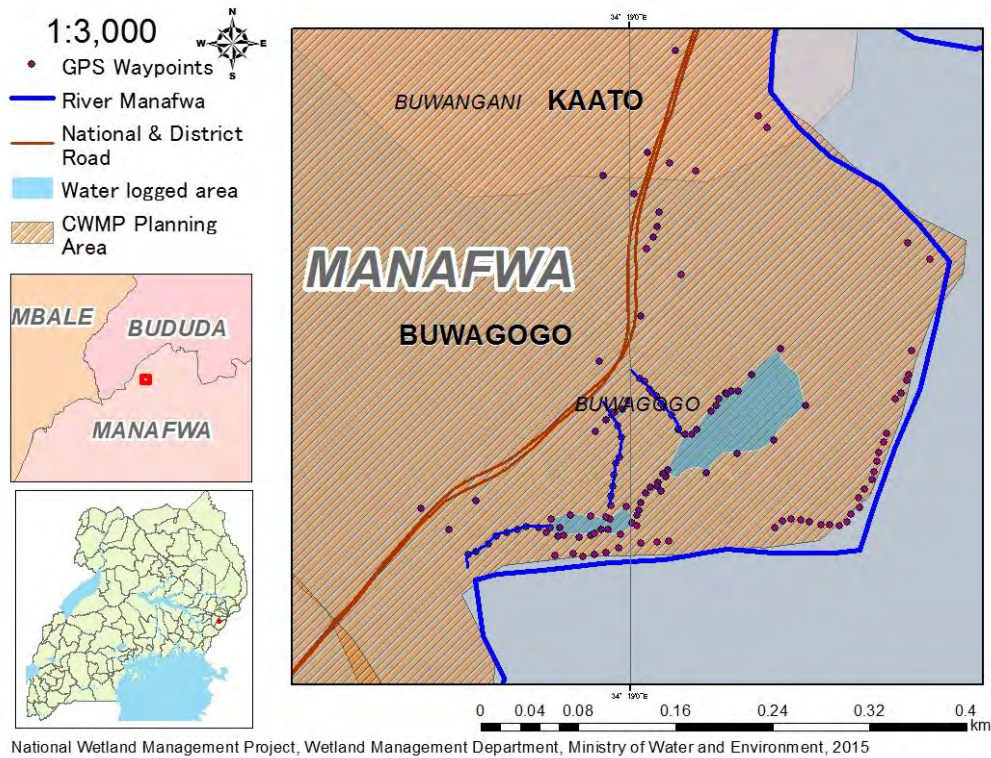


図 2-9 GPS を利用した湿地境界設定の例

県担当官は、上記の情報に加え、境界内に農地を有するメンバーがいる場合には、彼らのインベントリー作成にも取り組んだ。このインベントリーは、1) 氏名、2) 連絡先、3) 教育と技術、4) プロジェクト活動への参加の意志、5) 保護地区に含まれる利用中の土地、6) 1年あたりの通常の作付状況、7) 各作物の収穫高、8) 作物の通常価格などの情報を含むものである。

このような湿地境界の設定作業を行った上で、各県は、コミュニティメンバーとの覚書を交わした。覚書には、可能な限り、1) 土地利用者が保護地区を明け渡すまでの猶予期間、2) 各土地一筆の ID 番号、3) 各土地の面積、4) 地区内で許可された活動内容を示すものとした。

2) 生計向上活動の支援：いずれの地区も所得向上策を組み入れており、表 2-21 に示した通りである。それぞれの詳しい情報は、添付資料 9 に示した。

4.6 環境モニタリング計画の作成・実施

湿地システムは生態系の単位であり、上流の土地利用の変化が下流側の湿地生態系へ影響を及ぼすことになる。それゆえ、河川管理は、一体的かつ包括的な手段を用いて管理するため、流域アプローチを常に考慮する必要がある。

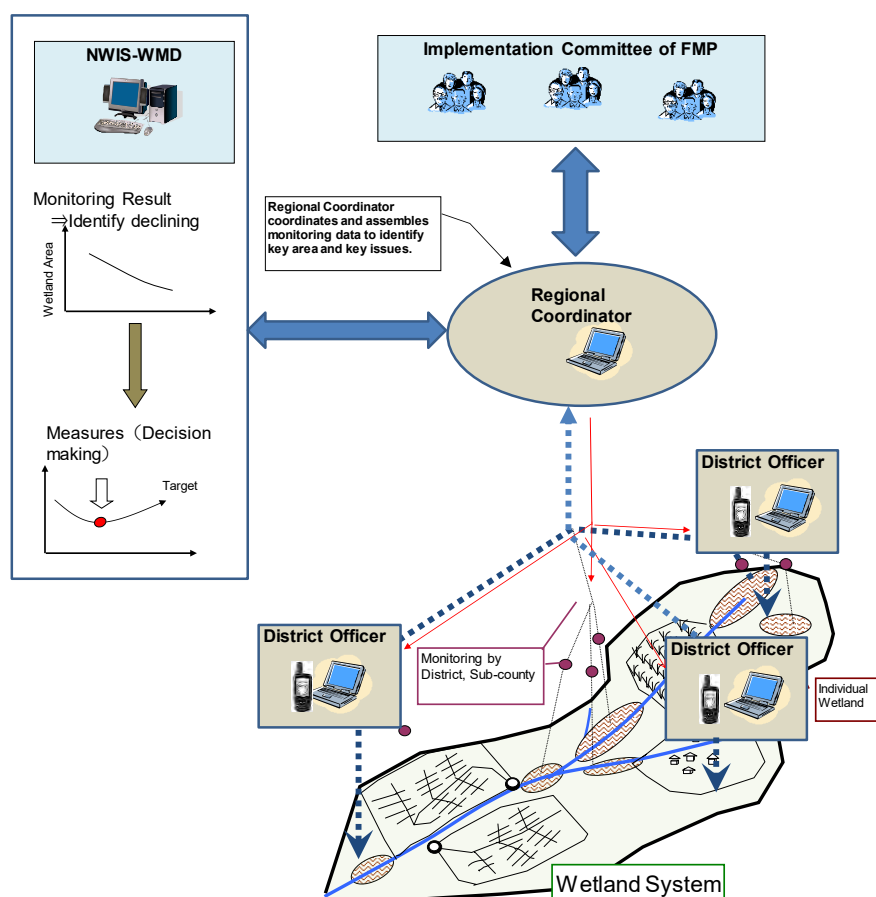


図 2-10 湿地システムレベルのモニタリング体制の概念図

個人による小規模な土地開発は軽微な影響かもしれないが、これが広範囲に及ぶ場合は、累積影響として下流側の湖の富栄養化や河川の氾濫、表面水や地下水への影響等、下流に影響を及ぼす可能性がある。このような累積影響の評価は、予測不可能かつ不確実性を伴い技術的に困難なものであるため、モニタリングすることが必要である。このようなモニタリング情報を収集、整理、分析することで、生態学的基準を維持するための原因と手法の解明を支援するべきである。湿地システム計画委員会では、目標及び目標に近い計画を練るための一時的な組織的活動を計画段階の間に行っており、設計及び実施モニタリング計画や、持続的な湿地管理に向けた活動等、活動の中心となる部分を徐々に展開してきた。データの収集について、技術的に許容される場合はコミュニティに委託できる可能性があり、この場合、湿地管理の情報整理

のために階層的な組織構造を構築する必要がある。湿地管理委員会が各湿地システムの観点から優先度を定めることとなるが、この鍵となるのは地方政府である。首席行政官、さらに具体的に言うならば地方議会と湿地計画委員会が様々な法的立場から意思決定を行い、管理のための新しいメカニズムが展開されよう。モニタリング体制におけるそれぞれの役割分担を表 2-22 に示した。

表 2-22 モニタリングにおける役割分担

関係者	モニタリングにおける役割
湿地システム管理計画実行委員会	✓ 湿地管理局の地域調整官のアドバイスに基づき、湿地システム内の湿地管理に必要な活動を検討し、予算を確保する。
湿地管理局 地域調整官	<ul style="list-style-type: none"> ✓ 関係する県において、生態モニタリング情報を収集、解析する。 ✓ 県担当官にモニタリングデータ収集に必要なアドバイスを行う。 ✓ 湿地管理局の NWIS 担当者と協力し、モニタリングデータを送信管理する。 ✓ 県担当官と協力し、生態状況の変化を評価する。 ✓ 湿地システム管理計画実行委員会に対し、湿地生態系管理に係るアドバイスを行う。 ✓ 湿地システム管理計画実行委員会と調整を行う。
湿地管理局 NWIS 担当者	✓ 湿地管理局地域調整官と調整し、生態モニタリングデータを整理・蓄積・管理する。
県担当官および郡担当官	<ul style="list-style-type: none"> ✓ 湿地管理局地域調整官の監督の下、生態モニタリングデータを収集する。 ✓ 湿地管理局地域調整官およびコミュニティメンバーと協議し、生態状況の変化の原因を分析する。

4-7 規模拡大に向けた優占パイロット地区の選定

Katakwi 県の活動は、湖面を共有する Ngora 県、Kumi 県および Soroti 県と協力して実施しなければ生態系への影響は発揮されず、住民への生計向上にも資することがないので、この活動を規模拡大することにした。

4-8 パイロット活動における支援規模の拡大

Katakwi 県の Toroma 郡 Akurao 地区¹および Kapujan 郡 Kokorio 地区で実施支援した活動を Ngora 県、Kumi 県および Soroti 県へ普及し、ビシナ湖全体の活動へと拡大した。その結果、湿地の境界設定を行った合計活動距離は約 100km に達した。2016 年は、主に 3 つの活動：1) 湿地管理委員会の活性化、2) 湿地の境界設定、3) 漁業規制の施行の 3 段階の活動支援を行った。

1) 湿地管理委員会の活性化：この一連の活動では、湿地管理委員会を立ち上げ、漁業規制を行うことができるように支援をした。委員会のメンバー各自は、漁業規制に従う必要があり、

¹ Parish

規則に従わない場合は、罰則が与えられる。漁業規制は、目の小さい漁網を使うことを規制するなどの対応をした。さらにコミュニティのメンバーとの協議によって、禁漁日を設ける場合もある。

2) 湿地の境界設定：湿地の保全のために保護地区、生態地区など、湿地境界を設定するための一連の活動である。2015年の活動では、カタクウィ県の2つの村落漁港で約10kmの距離の湖沼沿岸地区の境界設定を数ヶ月で行っている。境界設定前では、土地利用は無計画で規制を行うことができなかった。そのため魚類の棲息環境が破壊され、漁民と家畜飼養者との間で湿地資源をめぐる潜在的な競合が認められた。一方で、農業活動は、湖岸近傍で行われ、結果として湖への土砂流入を促進し、それが植生の変化を引き起こし、これは水産資源の確保に望ましいものではなかった。本プロジェクトでは、保護地区と利用地区を設定し、村落漁港、放牧地、魚類の産卵地区および特に女性が利用する季節的な漁場を区分けした。なお、本活動は、Katakwi 県に加え、Ngora 県、Soroti 県および Kumi 県で行われた。

3) 漁業規制の施行：規制を設けてそれを実施することが重要であり、そのために規制の順守状況を巡回し、取り締まる必要がある。そのためにエンジンボート付きの船舶を Katakwi 県に供与した。このような活動は、湿地管理委員会のメンバーに委ねることとした。但し、燃料費用確保することも持続性確保のために必要であり、商業目的にも船舶を利用することとした。

4.9 湿地管理計画のレビュー・更新

生態モニタリングの実施に際して、各ゾーンの位置関係、特に植林地帯の妥当性を検討した。なお、通常、計画の見直しは、5年ごとに行われることになっており、湿地管理局は、県職員と連携して、コミュニティが行う見直し作業の支援をする予定である。

2.5 成果5 湿地関連活動の調和

5-1 主要な関連法案、規制、ガイドラインの見直し

主要な関連法案、規制、ガイドラインの見直しを行うに当たっては、湿地管理局の第4号出版物である「Guidelines for Paddy Rice Cultivation in Seasonal Wetlands」に焦点を絞ることとした。これは2014年に改定され、増刷されたものである。また、この見直し作業では、特に湿地の賢明な利用と水田決議が実施できるよう配慮した。この見直し作業では、種々の課題が特定されたが、特に重要なものとして以下の2点をあげることができる。

1. 改定前のガイドラインでは、大規模灌漑事業を対象としたものであるのか、中小規模の水田稲作農家を対象としたものであるのか判然としていなかった。
2. 改定前のガイドラインでは、生物多様性保全および湿地の賢明な利用という観点が十分に反映されていない。

5-2 政策枠組みおよび関連施策を強化するための勧告

特定された課題に対し、具体的な勧告をし、ガイドラインの改定を進めた。

1. 大規模水田事業では、通常の EIA の手続きに準拠して評価を行うため、改定に際して、ガイドラインは、特に中小規模の水田農家に焦点を当てるべきである。
2. 改定にあたっては、生物多様性の保全および湿地の賢明な利用などに焦点を当てるべきである。本勧告事項は、1)改定ガイドラインの目的を記載した節において、湿地の生物多様性を確保し、賢明な利用を促すことが明記されていること、また、2) 有機性資材の利用が強調され生物多様性への影響を最小限に抑えられるよう配慮したこと、さらに 3) 農業生産技術についてもある程度の紙面を割り、保全と生計向上の双方のバランスを図っている点からも確認できる。

2.6 成果 6 湿地管理に携わる C/P 機関職員等の能力強化

6.1 能力レベル・研修ニーズの把握

能力レベル・研修ニーズの把握は、様々な機会や手段によって実施した。県湿地担当官を対象にしたアンケート調査、あるいは一対一の対話や観察が活用された。これらは表 2-23 に整理した。

表 2-23 能力レベル・研修ニーズの把握

成果	目的	方法	結果
成果 1	湿地管理局職員 の NWIS/database の管理能力把握	一対一の対話 と観察	WMD の職員の大半は NWIS 操作にまだ慣れていないことが明らかになった。彼らは NWIS からデータを抽出することができず、また Access 形式のデータでデータテーブルのリレーショナルリンケージについて把握していない。湿地評価結果は NWIS に関する訓練プログラムに組み込んだ。
	県事務所からの 情報へのアクセ ス	質問票と観察	2 つの湿地システムの県湿地管理担当職員は、誰も公式に事務所からインターネットに接続することができないことが明らかとなった。彼らの大半は個人的にモデムを使用してアクセスするか、近くのインターネットカフェでインターネットを使っている。県によっては、近隣にインターネットカフェがないために別の県にあるインターネットカフェに出向いてネットへのアクセスを確保している場合もある。さらに、インターネットへのモデムの接続性は、県によって、サービスプロバイダごとに異なることが明らかになり、県ごとに異なる会社のモデムが必要であることが判明した。
	県事務所におけ る事務所環境	一対一の対話、 観察および質 問票	湿地の県職員の大半は、デスクトップコンピューターを持っている。しかし、新しい県の職員の一部は、パソコンを持っていない。事務所の大半はプリンタを持ってはいるが、プリンターカートリッジを購入するための予算を有していない。

成果	目的	方法	結果
成果 2	県事務所職員の湿地評価手法に係る基本認識	質問票	2つの湿地システムの県職員の大半は参加型調査手法を適用した経験があることが明らかになったが、その程度はばらつきがあると判断された。それとは対照的に、洪水制御機能と土壌浸食式などの技術的な評価方法には精通していないと考えられた。
	生態評価と生計評価の手法についての理解	一対一の対話	生態系評価についてその結果は、現在、まだ特に文書化していないが、1) 作業計画/マニュアルと 2) トレーナーズトレーニングフィールドスクールのデザインに反映した。
全体	日本におけるカウンターパート研修の設計	一対一の対話	湿地評価の成果は、日本でのカウンターパート研修のプログラム設計に反映した。

6.2 「湿地管理マニュアル」の作成

詳細湿地評価作業計画を、2012年12月までに作成した。本作業計画は評価の方法論を定め、報告様式等も示しており、湿地評価マニュアルの一部となる。本文書は2つの湿地システムの県湿地担当官と湿地管理局の職員に提供した。なお、本プロジェクトでは、表 2-27 に示した各種ガイドラインおよびマニュアルを策定しているが、これらの手法および考え方を総括したガイドラインとして、Implementation Guideline を作成し、添付資料 10 に示した。

6.3 研修プログラムの企画・実施

本プロジェクトでは、主に 1) 全国研修、2) カウンターパート研修を実施した。

全国研修: 全国の湿地管理担当官に対する研修は、プロジェクト完了までに 3 回実施した。研修開催にあたっては、全国の県を中央部、北部、西部および東部の 4 つのグループに分け開催し、各研修では約 30 名の出席者数と絞って研修効率を高める工夫をした。全国研修の概要を表 2-24 に示し、参加者リストを添付資料 11 に示した。

カウンターパート研修: 日本におけるカウンターパート研修は、年ごとに内容を検討の上で実施された。各年の内容は、表 2-26 に示した。

表 2-24 全国研修

年	主な課題	概況	参加者数
2013	NWIS	本研修プログラムは、県職員が国内の湿地に係る情報をダウンロード、アップロードし、情報共有をすることができるように設計した。特に 1) オンラインの ArcGIS を利用して、地図や位置情報を共有できる。2) ドロップボックス等のファイルホスティングサービスを利用して、アクセス形式のデータを交換できることを目指した。さらに NWIS は本プロジェクトで多機能化しており、1) 湿地ポリゴンデータを KML 形式に変換できる。2) アクセス形式の湿地セクション調査およびモニタリングサイトデータをエクセル形式（また、その反対も）に変換できるように訓練をし、NWIS を使いこなせるように指導した。こうして、これらデータは汎用性がある GoogleEarth 上で利用することができ、また、エクセルも利用できるようになった。さらに NWIS 内のデータ内容とその関連性について詳しく説明し、これらデータへのア	中央部 :26 北部 :25 西部 :27 東部 :35 合計 :113

		クセスと利用について説明した。	
2014	湿地管理計画	2つ対象湿地システムに含まれる県職員が、湿地管理計画に関する知識と技術を習得するため、6日間の研修を Mbale(5月26日～31日)、および Kumi(6月9日～14日)で実施した。研修は、総合的水資源管理、ジェンダー、気候変動、コンフリクトマネジメント、経済価値分析、ステークホルダー分析等の項目で構成された。参加者は、パイロットプロジェクトを実施する県の技術職員、パイロットプロジェクトが実施される郡から計2名、パイロットプロジェクトを実施しない県から1名という構成であった。計画作成プロセスに係る4日間の研修プログラムが企画され、2014年9月下旬より実施されている。実施場所は、Mbarara、Seeta、Gulu および Mbale で、全国の県職員を対象としている。	中央部 :20 北部 :25 西部 :27 東部 :35 合計 :87
2016	賢明な利用に係るパイロット活動	全国研修は、1)パイロットサイトでの経験に接する機会を提供し、2)コミュニティ湿地管理計画を作成する際の教訓を学び、3)コミュニティレベルの湿地管理の課題を把握するために全国のすべての県湿地管理担当官の研修を開催した。参加者は、ナマタラ湿地システムおよびアウォジャ湿地システムからそれぞれ3カ所のパイロットサイトを訪問した。具体的にはナマタラ湿地システムでは Bududa, Butaleja および Kibuku 県を、アウォジャ湿地システムでは、Kapchorwa, Sironko および Katakwi 県を訪問した。訪問に先立って、関係する県職員が発表を行い、活動内容、主な課題と対策、教訓を事前に共有した。各地で、研修参加者は、地域の状況を観察し、コミュニティのメンバーから直接話を聞くことができた。現地訪問の後に、各県への適用可能性、実施上の課題を議論した。	中央部 :23 北部 :26 西部 :24 東部 :31 合計 :114

表 2-25 日本における研修の参加者

年	氏名	参加者の役職
2012	1) Barugahare Vincent	湿地管理局上級湿地管理官
	2) Kabaalu Deo	湿地管理局地域湿地調整官
2013	1) Afai Silvano	湿地管理局地域湿地調整官
	2) Kijali Kamwada Cyprian	Budaka 県環境管理担当官
2014	1) Kyambadde Richard	湿地管理局上級湿地管理官
	2) Samuka Muhamed	Pallisa 県自然資源担当官
2015	1) Lucy Iyango,	湿地管理局副局長
	2) Tindamanyire Teddy	主幹環境管理官
2016	1) Kagaba Carol	湿地管理局上級湿地管理官
	2) Owor Aloysius	湿地管理局モニタリングおよび法執行担当官

表 2-26 日本における研修の内容

年	概要
2012	第1回目のカウンターパート研修を日本で実施するための計画を作成し、9月初旬に2週間で実施した。研修の主な目的は、地域社会-NGO-政府の協力の下での住民参加・連携に焦点を当てており、特にウガンダにおける湿地管理に適用可能な教訓を得ることである。また、科学的調査の可能性と限界について学ぶことを目指した。
2013	日本における第2回目のカウンターパート研修は2013年7月後半から2週間の期間で計画し、実施した。研修の主要な目的は、2012年と同じであり、主要な訪問場所は、1) 釧路湿地、2) 霧多布湿原、3) Kabukurinuma、4) 伊豆沼・内沼、5) 谷津干潟 (Yatsuhigata tidalflat) および6) 建設技研インターナショナルであった。湿地管理の実用的な側面に加えて、湿地の賢明な利用に関し、理論的側面を釧路公立大学での講義により補完した。さらに学術研究手法については千葉大学においてアジア諸国の泥炭地管理に焦点を当てて紹介した。
2014	第3回目の本邦研修は、2014年7月20日～8月1日の2週間の日程で企画され実施された。本研修の主な目的は、コミュニティの参加、コミュニティ・NGO・政府等の連携、生物多様性保全のための水田、科学的研究の機会と限界等に焦点をあてながら、ウガンダにおける湿地管理、特に本プロジェクト活動に応用可能な教訓や成功事例を引き出すことである。主な訪問先は、1) 釧路湿地、2) 霧多布湿地、3) 蕪栗沼、4) 伊豆沼・内沼、

年	概要
	5) 谷津干潟、6) 建設技研インターナショナル等である。湿地管理の実践的側面に加え、ワイズユーズの理論的概念が釧路公立大学で講義された。また千葉大学では、アジア諸国における水田からの温室効果ガス放出による気候変動の結果に焦点をあてた学術研究が紹介された。
2015	第4回目のカウンターパート研修は2015年8月2日～8月8日の1週間の日程で実施された。本研修のコース名称は、「水田景観と生物多様性 ウガンダへの適用可能性」であり、本研修は以下に示す項目の知見が得られるように構成されている。1) 日本の湿地保全政策、2) 湿地の生物多様性と保全活動、3) 住民主体の地域づくりと水田景観の保全、4) 灌漑農業と環境保全である。本研修の主な訪問先は、1)日本のラムサール条約登録湿地である谷津干潟、2)東京湾に面する干潟である三番瀬、3)関東で最も大きい棚田であり文化的景観を持つ大山千枚田、4)大規模灌漑地帯である印旛沼第二期地区の合計4箇所である。
2016	第5回目のカウンターパート研修は2016年9月上旬から2週間かけて実施した。本研修は「湿地保全に向けたGIS・リモートセンシング技術研修」というタイトルのもと、1)日本の湿地保全、2)湿地管理に向けたデータベース構築、3)QGISの分析手法、4)リモートセンシングの基礎知識、を取得することに焦点を当てて設計した。また、現地の実情と分析結果の比較を行うことを主な目的として、ラムサールサイトである1)戦場ヶ原、2)渡良瀬遊水地、3)谷津干潟で現地実習を行った。

6.4 研修プログラムの評価

研修を開催するごとにその評価を行った。特に計画策定に係る研修では、毎日、アンケートを利用して評価し、翌日のプログラムを練り直すなどの対応をした。全国研修では、研修開催の前後で評価を行った場合もあった。このような評価作業で確認された内容は、活動6.3に反映した。

6.5 プロジェクトの成果品の出版

2016年11月15日時点で、湿地管理局は、表2-27に整理したプロジェクトの成果品を出版することを決定した。

表 2-27 プロジェクトの成果品の出版

PDM	タイトル	概要
プロジェクト目標	1 Implementation Guideline	本ガイドラインは、プロジェクト目標に係る内容で、ウガンダにおける湿地管理の重要事項を整理した。これは湿地管理局の地域調整官および県職員が利用することを想定している。
成果1	2 NWIS Hand book	NWISの利用者が利用することを想定している。
成果2	3 Guideline for Wetland Assessment	湿地評価の方法論を整理した。
	4 Ecosystem Assessment Report	生態評価の結果を整理した。
	5 Livelihood assessment Doho-Namatala Wetland System	ドーホナマタラ湿地システムの生計評価の結果を整理した。
成果3	6 Livelihood assessment Report Awoja Wetland System	アウォジャ湿地システムの生計評価の結果を整理した。
	7 Framework Management Plan –	2014年1月22日に署名されたドーホナマタラ湿地システ

		Doho-Namatala Wetland System	ム管理計画である。
	8	Framework Management Plan – Awoja Wetland System	2014年1月24日に署名されたアウォジャ湿地システム管理計画である。
	10	Sub-County and District Wetland Action Plans Development Manual	郡湿地管理計画および県湿地管理計画策定プロセスを記載したマニュアルであり、湿地管理局の地域調整官および県職員が利用することを想定している。
	11	Sub-county Wetland Action Plans	郡湿地管理計画であり、これらが統合されて県湿地管理計画が策定されている。
成果 4	12	Wetland Management Planning Process Manual	コミュニティ湿地管理計画の策定手順をまとめたもので、湿地管理局の地域調整官および県職員が利用することを想定している。
	13	Community Based Wetland Management Plan	コミュニティ湿地管理計画である。
成果 5	14	Guideline for Paddy Rice	Guidelines for Paddy Rice Cultivation in Seasonal Wetlandsを見直して作成したガイドラインである。

2.7 その他の重要な活動

a) 供与機材の正式譲渡

水環境省に供与された機材リストは、表 2-28 に示した通りである。また、湿地システム管理計画の署名式の場において、第 1 年次に購入された以下の供与機材が、2 つの湿地システムの 20 県に正式に譲渡された。機材を受領した県は、Bududa 県、Manafwa 県、Butaleja 県、Palisa 県、Budaka 県、Kibuku 県、Mbale 県、Tororo 県、Kapchorwa 県、Kween 県、Napak 県、Ngora 県、Nakapiripiriti 県、Bulambuli 県、Katakwi 県、Kumi 県、Soroti 県、Sironko 県、Bukedea 県および Amuria 県の 20 県である。

- ノート型パソコン
- インターネットモデム
- カメラ付き GPS
- 電源安定器

表 2-28 水環境省に供与された機材リスト

Category	Description of items	Quantity
Vehicle	1. Nissan Patrol GL 4x4	2
Desktop Computer	2. DELL Optiplex 780 (inc. software)	2
Laptop computer	3. DELL Vostro (inc. software)	3
Printer	4. Canon iR-ADV C2020/C2020F color laser	1
	5. Canon imageRUNNER 2525 monochrome laser	1
UPS	6. UPS for Desktop Computer	3
	7. UPS for Laptop Computer	2
	8. UPS for multifunctional printer	3
Others	9. Extension cable	
	10. Orange huawei ce 0682 modem	3
	11. Inverter-Battery System	1

表 2-29 2つの湿地システムの県に供与された機材リスト

Equipment	Quantity	Specification
Laptop Computer	20	Intel Core i3 Processor (1.8GHz) Windows7 32-bit or 64-bit, Memory: 4GB, HD: 500GB DVD drive MS Office Professional (2010) Antivirus software 1 year contract
Modem	20	<ul style="list-style-type: none"> ✓ 6 sets of MTN's modems for Manafwa, Bududa, Kapchorwa, Kween and Napak ✓ 6 sets of Airtel modems for Ngora, Nakapiripiriti, Bulambuli, Kibuku, Butaleja and Budaka ✓ 8 sets of Orange modems for Mbale, Tororo, Palisa, Katakwi, Kumi, Soroti, Sironko, Bukedea and Amuria
GPS	20	Garmin GPS Map 62sc
Voltage regulator	20	5 KVA

b) ODA 白書作成支援

日本国外務省は、ODA 白書²として知られる政府開発援助の年次報告書を発行している。本プロジェクトは、2014年に日本国政府が世界で実施している多数のプロジェクトの中から、1事例として選択された。そして、報告書の日本の読者に向け、湿地管理を簡単に紹介すると共に、NGOとして内水面養殖ビジネスを実施している、ある湿地利用者が紹介された。なお、本 ODA 白書は、日本の外務省のウェブサイト³で公開されている。

c) ウガンダ中央部・東部地域灌漑地区開発計画プロジェクトチームとの協調

事業実施中、本灌漑地区開発計画プロジェクトチームと定期的に調整を図った。また、日常的な調整に加え、JCC への参加や水田決議に係るワークショップを開催するなど特別な会議の開催にも務めた。

PISD との適切な協力関係を構築することを目的とし、2014年10月17日に合同ワークショップを開催した。同会合では、以下の4つの発表が行われた。

1. ラムサール条約の水田決議：ウガンダの持続的開発の潜在的手段
2. 湿地管理に関する法律および制度的枠組み
3. 湿地管理プロジェクト：東部地域における湿地のワイズユーズ
4. ウガンダ中央部・東部地域灌漑地区開発計画プロジェクト：湿地地帯における灌漑開発地区の境界設定案

² 「白書」自身は各々の国で別々の目的で使用されている。例えば、多くの英語圏の国々では、政府の政策発表や政策手段として利用されている。しかし、日本の白書は国民に対する政策の状況を伝えるために使われている。報告書は、その発行が法的に義務付けられ、閣僚の承認が必要である。

³ 国際協力の現場から 05 アフリカの湿地を甦らせる日本の挑戦 ～ウガンダで住民が期待する湿地管理プロジェクト～、
<http://www.mofa.go.jp/mofaj/gaiko/oda/shiryo/hakusyo/14_hakusho/column/column05.html>(2016年11月10日閲覧)

これらの発表の後、オープンディスカッションが行われ、下記の重要な点について大よその合意が形成された。

表 2-30 ワークショップでの検討項目および合意内容

検討項目	合意内容
ウガンダでの持続的農業に対するラムサール条約の水田決議の応用	出席者は、基本的にウガンダで水田決議が応用可能であることを確認した。これに際して、PISD の調査結果に活用することに合意した。
湿地管理プロジェクトと PISD 間の相乗効果への期待	出席者は、両プロジェクト間での相乗効果を期待する旨を確認した。
2015 年 6 月にウルグアイで行われるラムサール条約の COP12 において、水田決議のウガンダ(アフリカ)における実施例を紹介する可能性	出席者は COP12 で、ウガンダでの水田決議の実施例として活動を発表することに合意した。両省は 2015 年 3 月ごろには、PISD のフェーズ I の成果を基にしたより具体的な情報が提供されることを求めた。
湿地管理と灌漑の実施に係る、権限のある望ましいネットワークの必要性	出席者は必要性があることを認めた。
ウガンダにおける湿地保全と持続的農業を実現するための政策の妥当性	出席者は、2つの政策をレビューし、相乗効果とギャップのある分野を特定することによって調和を図ることの必要性を認識した。
ラムサール地域センターが東部アフリカでの水田決議の実施を主導することへの期待(2018 年の COP13 時に地域シンポジウムを開催)	出席者は、2018 年の COP13 までに事例を作ることに合意した。今後、詳細について検討する。

d) ラムサール COP12 への参加

第 12 回ラムサール条約締約国会議 (COP12) が、2015 年 6 月 1 日～9 日にウルグアイの Punta del Este で開催された。湿地管理局及び農業畜産水産省の担当官も本会議に出席し、湿地管理局からは Mafabi Paul 氏、Oloya Collins 氏、Iyango Lucy 氏、Barugahare Vincent 氏、Kagaba Carol 氏の 5 名、農業畜産水産省からは Kato Ronald 氏の 1 名が参加した。湿地管理局からの参加者 5 名中の 2 人分に係る旅費は本プロジェクトから資金供給を行い、農業畜産水産省から参加者に係る旅費は JICA ウガンダ事務所からの資金で賄われた。また、JICA チームの村松康彦もウガンダ政府の代表団とともに COP12 に出席した。“過去、現在、未来のラムサール-JICA 協力協定の実現”と題した 6 月 3 日のサイドイベントでは、湿地管理局の Mafabi Paul 氏が国家湿地管理プロジェクトに関するプレゼンテーションを実施し、農業畜産水産省の Kato Ronald 氏は、日本の環境省主催のサイドイベント内で水田決議のフォローアップとしてプレゼンテーションを行った。

本プロジェクトに直接関連するサイドイベントの主な概要を、表 2-31 に示す。

e) 湿地管理に係る地域シンポジウム

湿地管理に係る知見を共有し、本湿地管理プロジェクトから得られた教訓が他のアフリカ諸国でも活用され、さらに他国の経験をウガンダ国東部地域に適用することを促すことを主目的にシンポジウムを開催した。出席者は、東部アフリカの多様な機関の代表者が参加し、ラムサ

ール事務局、ナイル川流域イニシアチブ、JICA、バードライフインターナショナル、および政府機関が出席している。詳細情報を添付資料 12 に記載した。

表 2-31 ラムサール COP12 におけるサイドイベントのフォローアップ

サイドイベント		論点	教訓 / 提案
1	ラムサール条約の観点から見る泥炭地、気候調節及び生物多様性	泥炭地は、地表の 3%のみ覆われているということが明らかになっているが、世界中の森林バイオマスよりも炭素ストックがあるとされるなど、泥炭地の炭素ストック量に関する見解が議論されている。排水や泥炭地の不適切な管理は温室効果ガスの排出を促進する。	パピルスの湿地は、治水や特殊な生物多様性を持つ生息環境の場という観点から主に見られるものであるが、炭素に富んだ広大なパピルス原野に恵まれているウガンダの湿地を管理する上では、地球温暖化による観点も考える必要があるであろう。稲作を行う上でも、科学的根拠に基づいてパピルスの保全を議論されるべきである。
2	過去、現在、未来のラムサール-JICA 協力協定の実現	サイドイベントでは、JICA とラムサール条約事務局間の協力協定を実現した。ウガンダ人担当官の発表の加えてイラン人担当官もプレゼンテーションを行ったが、彼が発表時に強調したのは、湿地の復元に向けた流域アプローチに関する内容である。特に、湿地周辺におけるマイナスの影響や法的根拠に基づいた湿地管理委員会の設立支援について言及した。	サイドイベントは、次期 COP で期待される成果の見通しとともに、2018 年開催のラムサール COP13 に向けた道を開いた。JICA は、ラムサール事務局とともに MOC を活用することで、他国への影響の強化を模索する予定である。湿地管理プロジェクトにおいても、本方向に沿って活動が進められるであろう。
3	湿地管理と復元に関するケーススタディ：オーストラリアの Murray-Daling 流域における環境散水とイラン湿地管理と復元へ向けた貢献 (Urmia 湖)	国立公園の Urmia 湖は、イランでも有名な湖であるものの、上流の排水路が原因で現在消失しつつある。流域内の関連地方政府が、水資源の共同管理に向けた取り組みを規制したことはよく知られている。	水資源への流域管理アプローチは、下流の湿地を管理する上では不可欠な要素である。サイドイベント 2 におけるイランのプロジェクトによるメッセージを考慮すると、ウガンダの流域レベルでの湿地管理委員会は、法的根拠に基づくべきであろう。
4	湿地と災害リスクの減少：強いコミュニティ	このサイドイベントは、台風によって少なくとも 6300 人が亡くなったフィリピンによって提出されたものであり、湿地の復元案と災害リスクの減少に関連している。主に沿岸開発や土地転換、開墾が原因と言われるマングローブ林の破壊は、台風の影響が増加しているためだと言われており、この出来事は、気候変動の緩和に向けた重要な貢献を果たした。	災害防止という観点は、気候変動という流れを踏まえ、湿地管理政策の中で統合することができよう。フィリピン政府では、公共インフラに係る他省庁との連携を実現しており、いくつかの沿岸管理プロジェクトではマングローブ林の復元コンポーネントを統合してきた。ウガンダへの適用については、湿地と災害の因果関係やその他省庁との協力関係等を考慮して評価するべきである。
5	水田決議のフォローアップ	幅広い観点を持つ 7 つのプレゼンテーションが発表された。発表者は、次の 7 人である。1)ラムサールネットワークジャパン、2)日本の環境省、3)日本の農林水産省、4)韓国の国家湿地センター、5)日本の個人農家、6)MAAIF の Kato 氏、7)コロンビアの地方自治組織	稲作を行った結果として生物多様性がどのように変化したのかというデータは容易に入手できないことが確認された。これは、湿地の大部分が水田稲作に転換されて久しいためである。また、米生産と湿地保全に係る日本の知見は、ウガンダに直接適応し難いと認識された。ウガンダは、稲作による生物多様性の変化を、今後、観察し、保全が可能なむしろ有利な立場にあると言える。

第3章 プロジェクトの目標達成評価

3.1 概要

全体として、プロジェクトは、当初想定していた 16 項目の成果指標を達成した。評価結果の詳細は添付資料 13 に示した通りである。

3.2 成果の達成状況

プロジェクトの成果は、終了時評価実施時にその達成状況を評価し、要約を表 3-1 に示した。

表 3-1 プロジェクト成果の達成状況

ID	指標	達成状況評価
1.1	湿地管理のために必要なデータの категорияが国家湿地情報システムに追加される。	湿地観測地点、湿地モニタリング地点、河川、湖、保護地区、土壤図、植生図などの категорияの湿地関連データを NWIS に導入済み。
1.2	関係機関・団体が国家湿地情報システムにアクセスすることができる。	ArcGIS オンラインを利用して NWIS のデータは公開済み。GIS のソフトウェアを持っていなくても湿地管理に係るデータにアクセスが可能である。
2.1	詳細資源調査報告書が作成され、他の関係機関と共有されている。	湿地評価を実施し、2つの湿地システムの調査結果が報告書として整理された。調査結果は、湿地システム管理計画策定時に利用され、さらにウガンダ中央部・東部地域灌漑地区開発計画（PISD）実施に際して農業省とも情報を共有した。
2.2	関係機関が詳細資源調査で得られた情報を湿地管理のために利用できる。	湿地システム管理計画、県湿地管理計画を策定する際に、県職員らが報告書を活用した。さらにコミュニティ湿地管理計画の策定にあたっても、それらを活用した。
3.1	湿地システム管理計画が2つの湿地システムにおいて作成される。	湿地システム管理計画は、2014年1月22日および24日に、ナマタラおよびアウォジャにおいてそれぞれ正式に署名された。
3.2	湿地システム管理計画に基づいて、パイロット地区を管理する県の少なくとも50%において県湿地管理計画が作成される。	パイロットサイトを管理するすべての県において湿地システム管理計画にもとづいて県湿地管理計画が策定された。具体的には、ナマタラ湿地システムでは、Bududa、Manafwa、Butaleja、Pallisa、Budaka および Kibuku 県、また、アウォジャ湿地システムでは、Kapchorwa、Sironko、Bukedea、Kumi および Katakwi 県において、策定されている。
4.1	コミュニティ湿地管理計画が、コミュニティのメンバーの意見を集約して策定され、それらが県湿地管理計画と整	パイロット地区内のコミュニティメンバーは、参加者の意見を集約して策定され、また、それらは県湿地管理計画に基づいたものである。

ID	指標	達成状況評価
	合が図られている。	
4.2	コミュニティの湿地保全に関する意識が向上する。	コミュニティの湿地保全に係る意識は、2015年と2016年を比較した質問票にて、18%向上したと判断された。
4.3	パイロット活動に参加した住民の少なくとも50%が地方政府職員が提供する持続的生計向上手段に関する技術指導に満足する。	110名のコミュニティメンバーへの質問票形式の聞き取りで、県職員に対しては89%、Sub-county職員に対しては71%がその技術的支援に対し満足したと回答した。
5.1	関連政策、法令および規定において課題が特定される。	<p>Guideline for paddy rice cultivation を見直した結果、以下2点を始め種々の課題が特定された。</p> <ol style="list-style-type: none"> 1. 前のガイドラインでは、大規模灌漑プロジェクトを想定したものであるのか、中小規模のものを想定したガイドラインであるのか判断としていなかった。議論の結果、本ガイドラインは、中小規模の水稻農家を支援するためのガイドラインであることが確認された。これは、大規模灌漑プロジェクト等は通常のEIAの手続きを経るためである。 2. 前のガイドラインでは、生物多様性や賢明な利用などの考えが十分に記載されていないことが確認された。そのため改定ガイドラインはこれらの側面が強調され、それらは1) ガイドラインの目的が生物多様性保全と賢明な利用を促すことにあると宣言している点、また、2) 生物多様性への影響を抑えるために有機質資材の利用を推奨している点、3) 保全と生計向上を図るために、ある程度の農学的側面も記載されている点などから確認できる。
5.2	ワークショップおよびシンポジウムなどの議事録	2016年9月27日に Afrique suites hotel で開催された会議にて上に記載した事項が議論され、記録が確認された。
6.1	湿地管理局の職員およびパイロット地区を管理する県職員の少なくとも50%が湿地管理マニュアルを理解することができ、それを利用することができる。	<p>質問票を利用した調査において、湿地管理局の職員およびパイロット地区を管理する県職員の少なくとも50%が湿地管理マニュアルを理解することができ、それを利用できると回答し、本目標は達成されたと判断された</p> <ol style="list-style-type: none"> 1. NWIS handbook 5段階評価の質問票にて、理解度については67%の湿地管理局職員が「大変理解した」あるいは「よく理解した」と回答した。また、県職員は、90%以上が同様に前向きな回答をした。 2. 郡湿地管理計画/県湿地管理計画 マニュアル 湿地管理局職員および県職員のすべてが、「大変理解した」あるいは「よく理解した」と回答した。また、その利用についても同様にすべての職員が同様に前向きな回答をした。 3. Wetland Management Planning Process マニュアル 湿地管理局職員および県職員のすべてが、「大変理解した」あるいは「よく理解した」と回答した。また、その利用についても同様にすべての職員が同様に前向きな回答をした。

ID	指標	達成状況評価
6.2	全国の環境・湿地管理担当の県職員の少なくとも50%が湿地管理マニュアルを理解でき、それを利用することができる。	<p>質問票を利用した調査により全国の環境・湿地管理担当の県職員の少なくとも50%が 1) NWIS handbook, 2) 郡湿地管理計画/県湿地管理計画 マニュアル and 3) Wetland Management Planning Process マニュアルを理解でき、それを利用することができる」と回答しており、本目標は達成されたと判断された。</p> <p>1. NWIS handbook 5段階評価の質問票にて、全県職員の62%がハンドブックの内容を「大変理解した」あるいは「よく理解した」とし、また、利用することも同様に回答した。</p> <p>2. 郡湿地管理計画/県湿地管理計画 マニュアル 理解度については86%の職員が「大変理解した」あるいは「よく理解した」と回答した。また、利用については、87%が同様に前向きな回答した。</p> <p>3. Wetland Management Planning Process マニュアル 理解度については76%の職員が「大変理解した」あるいは「よく理解した」と回答し、その利用は74%が同様に前向きな回答をした。</p>

3.3 プロジェクト目標の達成状況

プロジェクトの目標は、終了時評価実施時にその達成状況を評価し、要約を表 3-2 に示した。なお、湿地保全と賢明な利用に関するモデルはガイドラインとして整理して、添付資料 10 に示した。

表 3-2 プロジェクト目標の達成状況

ID	指標	達成状況評価
1	パイロット地区の生態特性が変化していない。あるいは改善していることが生態モニタリングにもとづいて確認される。	<p>生態モニタリングは、写真撮影、水質モニタリングおよび Relevé を利用した植生の記載を主な手法として採用した。流域レベルで評価をするならば、2015年に湿地境界を決定し、2016年に植林活動を開始したばかりで、現時点では、具体的な変化は現れていない。</p> <p>しかし、パイロットサイトでそれぞれ関連する水域沿いに保護地区を設置し、植林を行ったため写真撮影にてその変化は記録され、その生態特性は改善している。</p>
2	少なくとも50%のパイロット活動の参加者が本プロジェクトで導入された持続的な生計向上手段を採用する。	<p>全てのコミュニティにおいてプロジェクトで導入した持続的な生計向上手段が採用されている。これは本プロジェクトが参加的な手法を採用し、生計向上手段を選定したためである。</p>
3	湿地管理マニュアルが、湿地管理局の公式な書類として承認される。	<p>2016年11月15日時点で、湿地管理局は以下のプロジェクトの成果品を印刷することを合意している。</p> <p>1 Implementation Guideline 2 NWIS Hand book</p>

ID	指標	達成状況評価
		<p>3 Guideline for Wetland Assessment</p> <p>4 Ecosystem Assessment Report</p> <p>5 Livelihood assessment Doho-Namatata Wetland System</p> <p>6 Livelihood assessment Report Awoja Wetland System</p> <p>7 Framework Management Plan – Doho-Namatata Wetland System</p> <p>8 Framework Management Plan – Awoja Wetland System</p> <p>10 Sub-County and District Wetland Action Plans Development Manual</p> <p>11 Sub-county Wetland Action Plans</p> <p>12 Wetland Management Planning Process Manual</p> <p>13 Community Based Wetland Management Plan</p> <p>14 Guideline for Paddy Rice</p>

第4章 主要な教訓

4.1 教訓の概要

本プロジェクト実施に基づき、教訓を抽出した。まず、本節では、プロジェクト成果ごとに抽出した教訓を以下に述べる。

成果1 NWIS 運営：GIS データの収集には、時間を要し、段階的に進める必要があった。NWIS は、定期的にデータが更新されて初めて意味のあるものであり、そのためデータ共有の手続きを構築しておくことが重要であろう。また、NWIS の情報管理のためには、十分な予算が確保されることが前提であることが新たためて認識された。

成果2 の湿地評価および意志決定システム：関連情報が省庁間に分散しており、評価実施のためのデータ集計にも時間を要した。意志決定システムは、カンパラマトリックスを始め種々の既存の意志決定のツールを組み合わせで作成したが、今後も、他の意志決定ツールと組み合わせで発展させていくことが重要である。

成果3 の湿地管理計画策定：計画策定に参加するステークホルダーの選定を慎重に進めることが重要と判断された。また、政治家とコミュニティが、特に重要なステークホルダーと考えられた。湿地管理計画は、その他の天然資源管理計画を反映させる必要があるが、同様に流域管理計画など他の資源管理計画も、湿地管理計画を反映させることが重要である。同時に、これら計画を県あるいは郡の開発計画に取り入れることも重要である。湿地システム管理計画は、精度面の検討が必要となるが、機能させるためには、地方政府組織に統合していくことが必要である。また、DWAP は、即座に具体的な活動へ移行させることが可能であり、政府の関連計画に取り入れることも容易である。

成果4 のコミュニティレベルの活動：生計向上手段に係る活動を開始するには、住民が優先する活動に焦点をあてるために十分な対話が必要であり、さらに財務面、社会面、組織面の検討が必要となる。参加するコミュニティに対し、生計向上活動と湿地管理の関係を十分に認識させることも重要である。

成果5 の水稲ガイドライン：政策統合は時間を要する活動であり、プロジェクトの範囲を超えた活動になる。しかし、本活動は、政策改善をもたらす活動と位置付けられる。

成果6 の能力開発：関連プロジェクトとの調整を図り、能力開発に相乗効果をもたらした。また、JCC メンバーを、相互に取り込むことにより、関連省庁の強化が実現した。それにより、本プロジェクトの原則を他のプロジェクトにも活かすことが可能となった。

4.2 教訓の具体的な内容

本プロジェクトでは、湿地管理計画の策定実施が重要なコンポーネントとなっていることから、プロジェクトにおける計画策定と実施の経験に基づき 18 の主要な教訓を表 4-1 に示した。なお、前の節で記載した内容の一部を以下においても詳述している。

表 4-1 湿地管理の実施に基づく主要な教訓

主要な教訓		適用	解説
1	主要なステークホルダーを特定し含めることは、湿地管理に係る全般的なコストを最小限に抑えることを可能とする。	全般	湿地管理は、合意に達するために直接的間接的を問わず湿地から利益を得る全てのステークホルダーの関与が求められる。一つの湿地は様々なグループの人々に使用されることが頻繁に見られ、それらには農業や放牧、漁業、水や砂の収集、パピルスの収穫等を生業にしている人々が含まれる。計画段階で主要な湿地利用者を除外することは、全体計画や湿地管理の実施の遅れをもたらし、後の段階で利害の絡む潜在的な対立を生じさせるリスクを増加させる。
		県および郡レベル	県および郡技術職員は、現場の計画進行に向けて重要な役割を担う主要なステークホルダーを特定することが必要である。全ての地元住民は湿地管理と何らかの利害を持つが、財政面の制約が原因で誰もが助言を得られるわけではない。それ故、少なくとも湿地に関する知識や関連を持つと推定される主要なステークホルダー（チーフや議長、環境委員会、湿地利用者などの地元代表者）と協議するべきである。
		コミュニティレベル (想定地主の関与)	計画の初期段階において、湿地利用者のみでなく湿地近隣の地主も特定し関与する必要がある。地主の中には”想定”地主もあり、彼らは湿地の中まで境界を広げかつ所有権を持つことが出来ると信じているものもいる。湿地の権利と所有権の違いに対して適切な啓発活動が行われない場合は、多くの衝突がコミュニティ計画の実施段階で生じるであろう。
		コミュニティレベル (湿地管理委員会メンバーの選定段階)	湿地管理委員会メンバーは、男女や世代のバランス、地区代表者に加え、漁業やパピルスの収穫、水の採取、放牧等で生計を立てている湿地利用者のタイプを考慮してコミュニティメンバーの中から選出されるべきである。加えて、大規模土地所有者のようなコミュニティ内で影響力を持つステークホルダーも湿地に隣接する彼らの土地利用を決定するため、委員として選出するべきである。多くの湿地利用者はオーナーから土地を借りただけであり、意思決定権を持たない。プロジェクトはコミュニティ内のパワーバランスや慣習を尊重し、社会的関係性を壊さないことが重要である。

主要な教訓		適用	解説
2	ジェンダーバランスは計画の初期段階から考慮すべきである。	計画段階の全期間	湿地の利用法は性別によって異なる。多くの場合、女性と子供は湿地から生活用水を採取している。性別毎の現状における湿地利用方法は、性差の役割や便益分析について計画初期段階のワークショップで議論されるべきである。女性、男性、少女、少年、若者、高齢者として湿地利用者を分類することが推奨される。
3	計画過程の初期段階における首席行政官(CAO)の関与が成功の鍵である。	計画段階の全期間	計画策定段階から県の首席行政官(Chief Administrative Officer)が関与すれば、他の県あるいは国の活動とのスケジュール調整が容易となり、計画策定作業との重複を避けることが可能となり、効率性が高まる。県職員が計画策定の初期段階で住民に情報を提供するために計画策定の関連会議へ出席することが極めて重要であり、そのようなスケジュールの調整が可能となる。また、計画の策定時の県のトップが参加することは、様々なセクター(水環境、農業、森林、漁業、コミュニティ開発等)の枠を超えて県職員の参加を促し、県としての方向性と責任を明確にすることが可能となる。
4	計画策定地域は、共通の意識や展望、資源を共有する人々を選定して、設計する必要がある。	全般	ウガンダにおいては、湿地管理の計画策定および計画実施において、流域管理アプローチは基本的な手法となる。しかし、このような物理的条件は、計画対象エリア/ユニットを決定する際に、湿地管理計画に参画する住民の一体性を十分に有することが重要であり、そこから生じるリスクを避けるために、注意深い地域選定が必要となる。同一流域内のすべての住民を参加させる結果、共通の事項に限られる場合には、例えば、計画立案者は、実施フェーズを長期に設定し、2段階へ分け、段階的に進めていくことを検討してもよい。こうして、実施主体も次第に経験と自信を積み、後々、大きな地域へて展開していくことが可能となる。
		湿地システム管理計画策定中	最低適正規模(Lowest Appropriate Level)は、しばしば統合流域管理に関する議論において引用される概念であり、これは、重大な環境問題が経験される規模と言い換えることができる。例えば、もし特定の問題が地元コミュニティ内のみで影響を持った場合、そのコミュニティが、適切な規模と言えよう。 Lowest Appropriate Level の概念に基づき、立案者は、もし共有資源に対する相対的な影響が限定的もしくは無視できる程度のものであれば、計画の進行時に重要でないいくつかのエリアを除外することを検討しても良い。このような対応は計画の効率性及び有効性を最大化するであろう。

主要な教訓	適用	解説
	コミュニティレベル (計画段階)	<p>コミュニティとは、資源を共有し、共通のビジョンと関心事を有する人の集まりと定義することができる。</p> <p>対象とするエリアが広くなると、2つ以上の勢力に対応しなければならない。例えば、Kumi 県の県職員は内陸の畑作コミュニティを漁村に加えた地域の線引きをしたが、これは概ね 97 km²の土地に相当し、カンパラ市の土地面積の半分と同等の広さとなる。同様のことが、約 34 km²の総面積を持ち内陸漁業コミュニティと稲作栽培者を含んでいた Budaka 県においても観察された。Kumi 及び Budaka 県の両方のコミュニティは、実施段階において利害の対立に直面した。</p> <p>一方、Bududa 県では山間部約 20km²の土地を対象とした。比較的小規模の土地であることに加え、計画エリアは、湿地管理計画に向けてさらに小規模のエリアに焦点を当てたという特徴を持つ。</p>
5	県環境担当職員による観測は重要であるが、その観察事項の検証も必要である。	<p>計画段階を通じて。より具体的には、湿地システム管理計画の策定期間</p> <p>県環境担当職員は、環境問題や湿地、生物多様性に関する現場の深い知識を所有している。資源を有効活用するために、彼らの知識や経験を計画段階で最大限活用することが重要である。しかし、彼らの経験や知恵も、財務的に許すのであるならば、必ず現地実測や科学的測定/分析、アンケート調査による検証をすることが望ましい。</p> <p>例えば、アウォジャ湿地管理システムにおける湿地システム管理計画策定の際、多くの県職員がオペタ湖の急激な土砂堆積が湖の容量を減少させていると強調していたが、現地視察及び上流の山地河川から湖の流入口の観察結果から、ふるい効果によって非常に微細な粒子のみが湖に到達していることが示唆され、県職員が主張するほどの短期的な影響は予見されなかった。</p>
6	関連する水管理ゾーンの職員との切れ目のない交流が強く推奨される。	<p>計画及び実施段階を通して</p> <p>水環境省は、全国の水管理区域として 1) ヴィクトリア、2) チョガ、3) アルバート、4) アッパーナイルの 4 区域を指定している。湿地管理は水資源管理の一部分であることから、水管理区域を担当する職員との切れ目のない交流が望ましい意。ナマタラ及びアウォジャ湿地管理システムの湿地管理計画策定段階では、湿地管理局はチョガ水域管理事務所の担当者との緊密な連携を保った。</p>
7	県職員およびその補佐職員を柔軟に動員することが、適切なタイミングで、かつ迅速な計画の策定に	<p>県レベルの計画段階</p> <p>県職員は常に複数の業務を抱えている。計画策定時、彼らは他の緊急事項への対応で、計画策定をスムーズに行えない場合も多々ある。そのため、県レベルの担当者は、彼の手持ち業務を考慮のうえで柔軟に人選する必要がある。一つの県又は郡の作業の遅れは、追加のフォローアップ活動など、後の段階でさら</p>

主要な教訓	適用	解説
	必要である。	なる追加コストを必要とする場合がある。
8	多様な参加型の計画手法を活用し、コミュニティメンバーの主体性を高めることが必要である。	<p>県湿地管理計画及び郡湿地管理計画、コミュニティ湿地管理計画作成時</p> <p>資源マッピングは、湿地及びその他重要な資源の場所を視覚化するための一つの有効な手法であり、湿地資源に関する課題や問題、機会を議論するための基礎とすることができる。演習中は、地図を描かせる時間を与え、参加者に近隣コミュニティの境界に関して議論させ、同意を得ることが重要である。この演習は、人々を集めるとともに彼らの間に信頼を構築することが出来る。</p>
9	郡湿地管理計画と県湿地管理計画は、予算配分を確実にするために当該開発計画に統合する必要がある。	<p>郡開発計画に郡湿地管理計画を統合する際には、郡の湿地担当官および郡長が、郡湿地管理計画で提案された活動が確実に予算や資金を確保できるよう担保することが重要である。これは郡のトップによる実施を促進するだけでなく、種々の資金源からこのような活動に資金を手当てする機会を彼らに与えることができる。同じ手順は県湿地管理計画を県開発計画(DDP)に統合する際にも適応できるだろう。</p> <p>県湿地管理計画の承認時</p> <p>県湿地管理計画が策定された後、この書類は部門別委員会に提示され、正式な政策としての承認を得るために県議会に提示される。この過程を経過しない限り、県湿地管理計画は不完全となる。この後、県湿地管理計画は県議長と首席行政官の両方に承認され、モニタリングの実施を補助するために水環境省(MWE) 湿地管理局(WMD)へ写しが提出される必要がある。計画策定スケジュールは、また、予算調整も十分考慮する必要がある。そのため、定期的な会議を通して、関連委員会と議会による承認を受ける計画策定スケジュールを組むことが望ましい。</p>
10	コミュニティにおける所得向上活動(IGA)を優先化するために客観的基準を用いるべきである。	<p>計画及び投資前段階</p> <p>保全と管理に係る活動は、常に予算不足との闘いである。特にコミュニティの支援は、予算を必要としている地域の数が多く、課題が多い。そのためコミュニティの優先付けは、湿地管理をうまく行うために重要な過程と考えられる。</p> <p>一方で、所得獲得のための活動(IGA)は極めて重要であるが、その支援はそう簡単なことではない。まったく新しい取り組み、大規模な物理的投資、また、複雑な技術支援を含むような活動はリスクが高いと言える。また、計画策定段階で、簡易な実施可能性及び持続性を評価することが望ましい。このような評価は、近隣での経験に基づいて、施設費や機材の保守サービスの情報を参考にして評価することができるだろう。物理的な投資に先立ち、可能な限り経済評価を実施することが望ましい。</p>

主要な教訓	適用	解説
11	<p>水域に沿って保全区域を設定する際には、生態的な重要性和正と負の潜在的な社会経済的影響を考慮した上で境界を定めることが必要である。</p>	<p>コミュニティレベル (湿地境界設定時)</p> <p>湿地境界の設定は、一般に低湿地帯と畑作地帯の生態的な境界線を決定する作業と見なすことができる。これには年間の水利用に関する現場の知識が必要である。しかし、本プロジェクトでは、保護地区と規制がかけられる緩衝地区の間の境界を定めることを勧告する。この境界は湿地利用の実態に基づき、コミュニティによって合意、決定されるものである。</p> <p>プロジェクトによってサポートされたコミュニティは、National Environment (Wetlands, River banks and lakeshore management) Regulations, 2000 の 29 条項に基づき、一般的な保全ゾーンを設定するために湿地の湿地境界設定に着手し、加えて彼らは特定の活動を行うことが許可された境界を決定してきた。実際に保護及び規制ゾーンの設定は、パイロット地区ごとに異なっている。職員は湿地境界設定の作業を通じて、1)GPS 座標付きのプロジェクトエリア全体マップ、2)GPS 座標付きのゾーン識別番号、3)ゾーン毎の指定/規制利用など、幅広い情報の収集も行った。加えて、同意された境界内で農業利用等を目的とした土地利用者が居た場合、利用者のインベントリーも作成した。このインベントリーには 1)利用者の氏名、2)連絡先と電話番号、3)学歴やスキル、4)その他プロジェクト活動に参加する意思、5)保全ゾーンの範囲、6)年間栽培作物（平均）、7)平均作物収穫量、8)作物価格等の情報が含まれている。湿地境界設定が完了すると、県は、県及びコミュニティ間で合意された覚書（MOU）を作成した。この MOU は 1)コミュニティによって合意された引き渡しまでの猶予期間、2)ID を伴うゾーン、3)各ゾーンの推定面積及び 4)各ゾーン内の規制または許可活動に関する項目が含まれている。</p>
12	<p>住民による反対や非協力的な態度を避けるためにも、湿地管理に関する明確な情報をコミュニティに提供する必要がある。</p>	<p>コミュニティレベル (湿地境界を設定する段階で、住民による反対や非協力的な態度が認められた時点)</p> <p>計画が円滑に進んでいる場合でも、特に湿地境界設定の際にはコミュニティは抵抗をしたり、否定的な態度を向けることがある。それらの大半はプロジェクトによって彼らの土地が奪われるか、失われることを恐れているためである。このような状況では、コミュニティと集中的に対話するための場を持ち、正確な情報を提供することが重要である。プロジェクトの目的やより良い管理に向けて、賢明な利用原則とどのように関連しているかをコミュニティが理解できるようにすべきである。</p> <p>強い抵抗が予想される地域は、対象から外すことも検討の価値がある。しかし計画策定者は、継続的な啓発活動を行って、後の段階で、コミュニティを動員することもまた、勧められる。コミュニティとの協議では、立案者は保全に向けて彼らの土地</p>

主要な教訓		適用	解説
			を無理やり手放させることよりも、第一に彼らと信頼関係を構築する必要がある。
13	湿地における適切な種の選択を行うために、県森林管理担当官 (DFO) あるいは国家森林局(NFA)の指導を受ける必要がある。	コミュニティレベル (湿地境界設定及び植林)	保全目的のために湿地内に植林する際には、県森林担当官(DFO)や国家森林局 (NFA)からのアドバイスを基に湿地に適した種を選択すべきである。一般的に、コミュニティは収入を増やすことを目的に商業的な種を好むが、いくつかの種は湿地内での生息に適していない。さらに、マホガニーのような商業的な種の苗は、植林後に近隣住民によって抜かれ、彼らの土地へ植え替えられるケースもある。
14	コミュニティまたは県のチームが、湿地境界の標識として、他の樹木苗に置き換えていく作業は、同意された保全ゾーン及び緩衝ゾーンを維持するためにも重要である。	コミュニティレベル (湿地境界設定及び植林)	いくつかのプロジェクトエリアでは、木や枝等の境界目印が近隣住民による抜き取られるか、家畜によって破壊され、保全ゾーンと規制ゾーンの間境界が不明確になる場合がある。このような場合は、合意されたゾーンや緩衝ゾーンを維持するためにもコミュニティまたは県の計画策定支援チームによって境界を示す目印を植え替える作業が必要となる。これはパイロット活動を実施する前に、MOU で言及すべき内容である。
15	湿地システム管理計画に基づき県実施委員会および湿地システム管理計画実施委員会は、モニタリングと評価を行うための権限を持つ必要がある。	実施段階を通して	県実施委員会および湿地システム管理計画実施委員会は、湿地システム活動計画の進捗及び達成状況を測るために、定期的なモニタリング及び評価を行う責任を持つ。委員会は、県を超えた湿地の管理上の課題を特定し、県を超えた活動の調和を図るためのものである。
16	コミュニティメンバーが合意事項を実施するよう、湿地とその水域の持続的管理に係る啓発活動を行うことは継続して行う必要がある。	実施段階を通して	持続的な湿地利用のため、特に MOU または Bye-law で同意された保全ゾーンと規制ゾーンに関して、地元住民に継続的な啓発活動を行う必要がある。保全ゾーンは、誰もが使用すべきでない。一方、規制ゾーンは、植林、養蜂、養魚池、米及び野菜の生産や農林業のような賢明な利用原則に適した活動のみが利用できる。その他の活動は、陸域の生産ゾーンで活動が実施されるべきである。 いくつかのケースでは、区画分けされたエリアに米栽培やその他作物の栽培を目的とした住民が再度侵入したケースも確認された。協定の施行は湿地管理に向けて極めて重要なものである。MOU やその他主要な協定の定期的なレビューもまた成果の維持を行うために必要である。

主要な教訓		適用	解説
17	県職員は湿地の賢明な利用に関するモニタリングと執行に向け、環境警備担当官と常にとともに活動することが重要である。	実施段階を通して	県環境担当職員は、住民及び生態系全体に湿地の便益を広く裨益させるために、常に環境警察と連携することが望ましい。確立されたゾーンを保全するため、コミュニティメンバーによる継続的なモニタリングは湿地の生態系機能を向上させるためにも必要不可欠なものである。湿地の法律、政策、規制及び法令の施行は、罰金や罰則を伴うため、湿地の保全に向けて極めて重要なものである。
18	オーナーシップの意識を持続的に発揮し、資金拠出のためにも、NUSAF3 や CDD 基金のようなその他政府プログラムとプロジェクトを統合することが必要である。	実施段階を通して	湿地管理は段階的なプロセスと見なすべきである。予算と期間の制約があるため、1つのプロジェクトで県湿地管理計画、郡湿地管理計画及びコミュニティレベルの湿地管理計画の全ての活動を実施することは出来ない。そのため、NUSAF3 や Community Driven Development (CDD) 基金のような県と郡内のその他政府プロジェクトにこれら計画をつなぐことが望ましい。これによってコミュニティメンバーが湿地の賢明な利用原則を通じ、活動を継続し、持続可能な開発が実現する。

第 5 章 勧告

事業完了後も受益者に便益を提供し、持続性を確保するために以下の事項を勧告する。

NWIS の継続的な利用のために以下事項を勧告する。

- 1 湿地管理局は ArcGIS の適切な維持のために年間 UGX 4.4 million の予算を確保する。
- 2 湿地管理局は ArcGIS の予算確保が困難となった時のために、QGIS の利用を進め、拡大する。
- 3 湿地管理局は NWIS ホームページ維持のための短期的策として、年間 UGX 417,900 の予算を確保する。
- 4 湿地管理局は NWIS ホームページ維持のための中長期的策として NWIS ホームページを省のウェブサイトに移転するか、あるいはリンクを張る。

関連県での活動を支援するために以下の事項を勧告する。

- 5 湿地管理局は水資源総局と連携し、情報交換を進め、両湿システムの Inter-district Implementation Committee の支援をする。
- 6 湿地管理局は東部地域コーディネーターを介して、チョガ流域管理事務所との連携を図り、湿地管理と流域管理の統合を一層進める。

コミュニティで始められた活動を支援するために、以下の事項を勧告する。

- 7 湿地管理局は少なくとも 1 年の期間、パイロット活動の監督とモニタリングを実施する。
- 8 湿地管理局は関連する県職員と協力して、例えば第 3 次北部ウガンダ社会活動基金 (NUSAF3) などの資金を活用して、支援資金を確保する。その際、資金確保の手続きは、湿地管理局を協力する。
- 9 県職員は、コミュニティでの活動支援のために、それらを県開発計画に統合し、無償資金の提供を確実なものとする。
- 10 湿地管理局はチョガ流域管理事務所および JICA 事務所と協力し、ウガンダ中央部・東部地域灌漑地区開発計画 (PISD) および本湿地管理プロジェクト双方の成果を活用し、相乗効果を高められるよう配慮する。

上位目標達成のために以下の事項を勧告する。

- 11 湿地管理局は上位目標達成のために方針を決定し、具体化の上、予算確保を図る。

添付資料

添付資料 1 PROJECT DESIGN MATRIX (ORIGINAL)

Project Name: National Wetlands Management Project

Duration: 2012 - 2016 (5 years)

Implementing Agency: Wetland Management Department (WMD), Ministry of Water and Environment

Date: April **, 2011

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
<p>Overall Goal: A model of conservation and wise use of wetlands is disseminated.</p>	Measures for conservation and wise use of wetlands introduced by the project are implemented in at least 1 wetland system other than the target wetland systems.	<ul style="list-style-type: none"> - Activity reports by WMD - and other relevant institutions and organizations 	<ul style="list-style-type: none"> - Relevant institutions and organizations maintain support for wetland management. - Wetland management officers utilize skills gained through the project's training. - Districts in other wetland system have budget to implement wetland management activities.
<p>Project Purpose: A model of conservation and wise use of wetlands is established.</p>	<ol style="list-style-type: none"> 1. Wetland dependent fauna and/or flora (indicator species) show no change in ecological character in pilot sites. 2. At least 50% of the pilot activity participants adopt sustainable livelihood options introduced by the project. 3. Wetland Management Manual¹ is approved as one of the WMD's official document. 	<ul style="list-style-type: none"> - Project's periodical reports - Ecological Monitoring Reports - Interviews and questionnaires 	<ul style="list-style-type: none"> - Wetland related policies do not change drastically. - Large scale industrial development does not occur at selected wetland systems. - Trained wetland management officers continue to work for wetland management.
<p>Outputs:</p> <ol style="list-style-type: none"> 1. National Wetland Information System is upgraded and functional. 	<ol style="list-style-type: none"> 1. Data categories necessary for wetland management are added in the National Wetland Information System. 2. Relevant institutions and organizations² are able to access the National Wetland Information System. 	<ul style="list-style-type: none"> - Project's periodical reports - User's guide for National Wetland Information System 	<ul style="list-style-type: none"> - Ugandan project staffs who acquired skills continue to work for WMD. - Budgetary support by WMD for maintaining computer programs including updating anti-virus programs continues.
<ol style="list-style-type: none"> 2. Scientific information of target wetland systems is available. 	<ol style="list-style-type: none"> 1. Detailed Resource Assessment report is developed and shared by relevant institutions and organizations. 2. Relevant institutions and organizations can utilize the data collected by the Detailed Resource Assessment for wetland management. 	<ul style="list-style-type: none"> - Detailed Resource Assessment Report - Project's periodical reports - Interviews and questionnaires to relevant personnel 	<ul style="list-style-type: none"> - Budgetary support by districts in the selected wetland systems for maintaining internet connection continue. - Decision-making based on scientific data prevails over political interference and pressure.
<ol style="list-style-type: none"> 3. Wetland management plans are prepared. 	<ol style="list-style-type: none"> 1. Framework management plans for two wetland systems are prepared. 2. District wetland action plans consistent with the framework management plans are prepared for at least 50% of districts in charge of managing pilot sites. 	<ul style="list-style-type: none"> - Project's periodical reports - Interviews to relevant personnel 	<ul style="list-style-type: none"> - Cooperation by all stakeholders is maintained. - Districts' political will is maintained. - Budgetary support and will of districts are maintained.
<ol style="list-style-type: none"> 4. Pilot activities for wise use of wetlands are implemented based on wetland management plans. 	<ol style="list-style-type: none"> 1. Community based wetland management plans that reflect communities' voices and are consistent with district wetland action plans are prepared. 2. Communities' awareness toward wetland conservation is enhanced. 3. At least 50% of pilot activity participants are satisfied with local government officers' technical instructions on sustainable livelihood options. 	<ul style="list-style-type: none"> - Project's periodical reports - Interviews and questionnaires to relevant community members 	<ul style="list-style-type: none"> - WMD and relevant district / sub-county officers continue to provide technical support for the wetland users. - Pilot activities are supported by target communities. - Sustainable Livelihood Options are not used to justify conversion of existing natural wetlands into human-made wetlands.

¹ A manual that describes proper methodology of wetland assessment, wetland management planning, sustainable livelihood options, etc.

² Ministry of Water and Environment, Ministry of Agriculture, Animal Industry and Fisheries, National Environment Management Authority, Districts in charge of managing pilot sites.

5. Wetland management officers'3 capacity is strengthened.	At least 50% of the WMD officers and local government officers who are in charge of managing pilot sites can understand and utilize wetland management manuals.	<ul style="list-style-type: none"> - Project's periodical reports - Interviews and/or tests to relevant personnel 	<ul style="list-style-type: none"> - No personnel changes occur. - Will of district wetland management officers is maintained.
Activities			
<p>1-1 Consult with relevant institutions and organizations to identify scientific data and information gaps.</p> <p>1-2 Review and redesign the National Wetland Information System.</p> <p>1-3 Procure and install the best option of software and hardware.</p> <p>1-4 Streamline the inventory format in line with the newly designed National Wetland Information System.</p> <p>1-5 Test applicability of National Wetland Information System at relevant institutions and organizations.</p> <p>1-6 Provide training on National Wetland Information System to staffs of relevant institutions and organizations.</p>	<p>Inputs:</p> <p><i>Japanese Side</i></p> <p>1) Experts: - Chief Advisor / Wetland Management - Project Coordinator / Training and Extension - Ecosystem Conservation - Sustainable Rural Development - GIS / Database - Environmental Economics</p> <p>2) Training: Technical training in Japan or third country for Ugandan project staffs</p> <p>3) Equipment: -Vehicle(s) -Equipment necessary for wetland data collection</p>	<p>Relevant institutions and organizations provide existing data required for project implementation.</p> <p>Districts and sub-counties in pilot wetland systems approve and make commitment for project implementation.</p>	<p>Preconditions:</p> <p>No drastic changes in wetland management policy occur.</p> <p>Project activities are accepted by relevant districts and sub-counties.</p> <p>Ugandan project staffs are assigned.</p>
<p>2-1 Review existing scientific and socio-economic information.</p> <p>2-2 Organize a district-led multi-disciplinary team to implement Detailed Resource Assessment.</p> <p>2-3 Develop work plans for Detailed Resource Assessment.</p> <p>2-4 Conduct Detailed Resource Assessment.</p> <p>2-5 Update wetland inventory and enter data into the upgraded National Wetland Information System.</p> <p>2-6 Design Decision Support System⁴.</p> <p>2-7 Link Decision Support System with National Wetland Information System and test applicability at relevant institutions and organizations.</p>			
<p>3-1 Organize Wetland System Planning Committees.</p> <p>3-2 Review and update existing framework management plans.</p> <p>3-3 Identify key issues in the target wetland systems.</p> <p>3-4 Discuss countermeasures for key issues.</p> <p>3-5 Wetland System Planning Committees develop framework management plans for the target wetland systems.</p> <p>3-6 Organize District Technical Planning Committees.</p> <p>3-7 District Technical Planning Committees develop District Wetland Action Plans in each district.</p> <p>3-8 Review and update Wetland System Management Plans and District Wetland Action Plans.</p>			

³ WMD staffs, wetland management officers at districts and sub-counties who are in charge of managing pilot sites, wetland management officers who work in other wetland systems.

⁴ A system that supports decision making by providing basic information on socio-economic and ecological importance of a particular wetland.

<p>4-1 Select pilot sites.</p> <p>4-2 Organize community based wetland planning and management committees.</p> <p>4-3 Develop community based wetland management plans with pilot communities.</p> <p>4-4 Identify sustainable livelihood options together with the pilot communities.</p> <p>4-5 Conduct training on sustainable livelihood options at pilot communities.</p> <p>4-6 Develop and implement ecological monitoring plan.</p> <p>4-7 Review and update wetland management plans based on monitoring results.</p> <hr/> <p>5-1 Conduct capacity and training needs assessment.</p> <p>5-2 Develop a Wetland Management Manual.</p> <p>5-3 Develop and implement training programs.</p> <p>5-4 Conduct evaluation of training programs.</p>		
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添付資料 2 PROJECT DESIGN MATRIX (REVISED) ON DATE: 19TH JUNE 2014

Project Name: National Wetlands Management Project

Duration: 2012 - 2016 (5 years)

Implementing Agency: Wetland Management Department (WMD), Ministry of Water and Environment

Date: 19th June 2014

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
<p>Overall Goal: A model of conservation and wise use of wetlands is disseminated.</p>	Measures for conservation and wise use of wetlands introduced by the project are implemented in at least 1 wetland system other than the target wetland systems.	<ul style="list-style-type: none"> - Activity reports by WMD - and other relevant institutions and organizations 	<ul style="list-style-type: none"> - Relevant institutions and organizations maintain support for wetland management. - Wetland management officers utilize skills gained through the project's training. - Districts in other wetland system have budget to implement wetland management activities.
<p>Project Purpose: A model of conservation and wise use of wetlands is established.</p>	<ol style="list-style-type: none"> 3. Ecological character of the pilot sites shows no changes or improvement in pilot sites based on the ecological monitoring plans of each site. 4. At least 50% of the pilot activity participants adopt sustainable livelihood options introduced by the project. 3. Wetland Management Manual⁵ is approved as one of the WMD's official document. 	<ul style="list-style-type: none"> - Project's periodical reports - Ecological Monitoring Reports - Interviews and questionnaires 	<ul style="list-style-type: none"> - Wetland related policies do not change drastically. - Large scale industrial development does not occur at selected wetland systems. - Trained wetland management officers continue to work for wetland management.
<p>Outputs:</p> <ol style="list-style-type: none"> 1. National Wetland Information System is upgraded and functional. 	<ol style="list-style-type: none"> 1. Data categories necessary for wetland management are added in the National Wetland Information System. 2. Relevant institutions and organizations⁶ are able to access the National Wetland Information System. 	<ul style="list-style-type: none"> - Project's periodical reports - User's guide for National Wetland Information System 	<ul style="list-style-type: none"> - Ugandan project staffs who acquired skills continue to work for WMD. - Budgetary support by WMD for maintaining computer programs including updating anti-virus programs continues.
<ol style="list-style-type: none"> 2. Scientific information of target wetland systems is available. 	<ol style="list-style-type: none"> 1. Detailed Resource Assessment report is developed and shared by relevant institutions and organizations. 2. Relevant institutions and organizations can utilize the data collected by the Detailed Resource Assessment for wetland management. 	<ul style="list-style-type: none"> - Detailed Resource Assessment Report - Project's periodical reports - Interviews and questionnaires to relevant personnel 	<ul style="list-style-type: none"> - Budgetary support by districts in the selected wetland systems for maintaining internet connection continue. - Decision-making based on scientific data prevails over political interference and pressure.
<ol style="list-style-type: none"> 3. Wetland management plans are prepared. 	<ol style="list-style-type: none"> 1. Framework management plans for two wetland systems are prepared. 2. District wetland action plans consistent with the framework management plans are prepared for at least 50% of districts in charge of managing pilot sites. 	<ul style="list-style-type: none"> - Project's periodical reports - Interviews to relevant personnel 	<ul style="list-style-type: none"> - Cooperation by all stakeholders is maintained. - Districts' political will is maintained. - Budgetary support and will of districts are maintained.
<ol style="list-style-type: none"> 4. Pilot activities for wise use of wetlands are implemented based on wetland management plans. 	<ol style="list-style-type: none"> 1. Community based wetland management plans that reflect communities' voices and are consistent with district wetland action plans are prepared. 2. Communities' awareness toward wetland conservation is enhanced. 3. At least 50% of pilot activity participants are satisfied with local government officers' technical instructions on sustainable livelihood options. 	<ul style="list-style-type: none"> - Project's periodical reports - Interviews and questionnaires to relevant community members 	<ul style="list-style-type: none"> - WMD and relevant district / sub-county officers continue to provide technical support for the wetland users. - Pilot activities are supported by target communities. - Sustainable Livelihood Options are not used to justify conversion of existing natural wetlands into human-made wetlands.
<ol style="list-style-type: none"> 5. Wetland management officers⁷ capacity is strengthened. 	<ol style="list-style-type: none"> 1. At least 50% of the WMD officers and local government officers who are in charge of managing pilot sites can understand and utilize wetland management manuals. 2. At least 50% of the district officers in charge of wetland management over the country can understand and can use the wetland management manual. 	<ul style="list-style-type: none"> - Project's periodical reports - Interviews and/or tests to relevant personnel 	<ul style="list-style-type: none"> - No personnel changes occur. - Will of district wetland management officers is maintained.

⁵ A manual that describes proper methodology of wetland assessment, wetland management planning, sustainable livelihood options, etc.

⁶ Ministry of Water and Environment, Ministry of Agriculture, Animal Industry and Fisheries, National Environment Management Authority, Districts in charge of managing pilot sites.

⁷ WMD staffs, wetland management officers at districts and sub-counties who are in charge of managing pilot sites, wetland management officers

NATIONAL WETLANDS MANAGEMENT PROJECT
 Project Completion Report
 Annex 2

Activities		
<p>1-7 Consult with relevant institutions and organizations to identify scientific data and information gaps.</p> <p>1-8 Review and redesign the National Wetland Information System.</p> <p>1-9 Procure and install the best option of software and hardware.</p> <p>1-10 Streamline the inventory format in line with the newly designed National Wetland Information System.</p> <p>1-11 Test applicability of National Wetland Information System at relevant institutions and organizations.</p> <p>1-12 Provide training on National Wetland Information System to staffs of relevant institutions and organizations.</p>	<p>Inputs:</p> <p><u>Japanese Side</u></p> <p>1) Experts:</p> <ul style="list-style-type: none"> - Chief Advisor / Wetland Management - Project Coordinator / Training and Extension - Ecosystem Conservation - Sustainable Rural Development - GIS / Database - Environmental Economics <p>2) Training: Technical training in Japan or third country for Ugandan project staffs</p> <p>3) Equipment:</p> <ul style="list-style-type: none"> -Vehicle(s) -Equipment necessary for wetland data collection 	<p><u>Ugandan Side</u></p> <p>1) Ugandan Project Staffs:</p> <ul style="list-style-type: none"> -Project Director -Project Manager -Project Coordinator -GIS/Database -Ecosystem Management -Sustainable Rural Development -Local Government Staffs <p>2) Furnished office in or near the WMD and relevant district government buildings</p> <p>3) Existing data and information required for project implementation</p>
<p>2-1 Review existing scientific and socio-economic information.</p> <p>2-2 Organize a district-led multi-disciplinary team to implement Detailed Resource Assessment.</p> <p>2-3 Develop work plans for Detailed Resource Assessment.</p> <p>2-4 Conduct Detailed Resource Assessment.</p> <p>2-5 Update wetland inventory and enter data into the upgraded National Wetland Information System.</p> <p>2-6 Design Decision Support System</p> <p>2-7 Link Decision Support System with National Wetland Information System and test applicability at relevant institutions and organizations.</p>		<p>Relevant institutions and organizations provide existing data required for project implementation.</p> <p>Districts and sub-counties in pilot wetland systems approve and make commitment for project implementation.</p>
<p>3-1 Organize Wetland System Planning Committees.</p> <p>3-2 Review and update existing framework management plans.</p> <p>3-3 Identify key issues in the target wetland systems.</p> <p>3-4 Discuss countermeasures for key issues.</p> <p>3-5 Wetland System Planning Committees develop framework management plans for the target wetland systems.</p> <p>3-6 Develop Sub-county Wetland Action Plans with support from parish representatives.</p> <p>3-7 Organize District Technical Planning Committees.</p> <p>3-8 District Technical Planning Committees develop District Wetland Action Plans in each district.</p> <p>3-9 Review and update Wetland System Management Plans, District Wetland Action Plans and Sub-county Wetland Action Plans</p>		<p>Preconditions:</p> <p>No drastic changes in wetland management policy occur.</p> <p>Project activities are accepted by relevant districts and sub-counties.</p> <p>Ugandan project staffs are assigned.</p>
<p>4-1 Select pilot sites.</p> <p>4-2 Organize community based wetland planning and management committees.</p> <p>4-3 Develop community based wetland management plans with pilot communities.</p> <p>4-4 Identify sustainable livelihood options together with the pilot communities.</p> <p>4-5 Support the communities in implementing the Pilot Projects.</p> <p>4-6 Develop and implement ecological monitoring plan.</p> <p>4-7 Review and update wetland management plans based on monitoring results.</p>		
<p>5-1 Conduct capacity and training needs assessment.</p> <p>5-2 Develop a Wetland Management Manual.</p> <p>5-3 Develop and implement training programs.</p> <p>5-4 Conduct evaluation of training programs.</p>		

添付資料 3 PROJECT DESIGN MATRIX (REVISED) ON DATE: 21ST JULY 2015

Project Name: National Wetlands Management Project

Duration: 2012 - 2016 (5 years)

Implementing Agency: Wetland Management Department (WMD), Ministry of Water and Environment

Date: 21st July 2015

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
<p>Overall Goal: A model of conservation and wise use of wetlands is disseminated.</p>	Measures for conservation and wise use of wetlands introduced by the project are implemented in at least 1 wetland system other than the target wetland systems.	<ul style="list-style-type: none"> - Activity reports by WMD - and other relevant institutions and organizations 	<ul style="list-style-type: none"> - Relevant institutions and organizations maintain support for wetland management. - Wetland management officers utilize skills gained through the project's training. - Districts in other wetland system have budget to implement wetland management activities.
<p>Project Purpose: A model of conservation and wise use of wetlands is established.</p>	<ol style="list-style-type: none"> 5. Ecological character of the pilot sites shows no changes or improvement in pilot sites based on the ecological monitoring plans of each site. 6. At least 50% of the pilot activity participants adopt sustainable livelihood options introduced by the project. 3. Wetland Management Manual⁸ is approved as one of the WMD's official document. 	<ul style="list-style-type: none"> - Project's periodical reports - Ecological Monitoring Reports - Interviews and questionnaires 	<ul style="list-style-type: none"> - Wetland related policies do not change drastically. - Large scale industrial development does not occur at selected wetland systems. - Trained wetland management officers continue to work for wetland management.
<p>Outputs:</p> <ol style="list-style-type: none"> 1. National Wetland Information System is upgraded and functional. 	<ol style="list-style-type: none"> 1. Data categories necessary for wetland management are added in the National Wetland Information System. 2. Relevant institutions and organizations⁹ are able to access the National Wetland Information System. 	<ul style="list-style-type: none"> - Project's periodical reports - User's guide for National Wetland Information System 	<ul style="list-style-type: none"> - Ugandan project staffs who acquired skills continue to work for WMD. - Budgetary support by WMD for maintaining computer programs including updating anti-virus programs continues.
<ol style="list-style-type: none"> 2. Scientific information of target wetland systems is available. 	<ol style="list-style-type: none"> 1. Detailed Resource Assessment report is developed and shared by relevant institutions and organizations. 2. Relevant institutions and organizations can utilize the data collected by the Detailed Resource Assessment for wetland management. 	<ul style="list-style-type: none"> - Detailed Resource Assessment Report - Project's periodical reports - Interviews and questionnaires to relevant personnel 	<ul style="list-style-type: none"> - Budgetary support by districts in the selected wetland systems for maintaining internet connection continue. - Decision-making based on scientific data prevails over political interference and pressure.
<ol style="list-style-type: none"> 3. Wetland management plans are prepared. 	<ol style="list-style-type: none"> 1. Framework management plans for two wetland systems are prepared. 2. District wetland action plans consistent with the framework management plans are prepared for at least 50% of districts in charge of managing pilot sites. 	<ul style="list-style-type: none"> - Project's periodical reports - Interviews to relevant personnel 	<ul style="list-style-type: none"> - Cooperation by all stakeholders is maintained. - Districts' political will is maintained. - Budgetary support and will of districts are maintained.
<ol style="list-style-type: none"> 4. Pilot activities for wise use of wetlands are implemented based on wetland management plans. 	<ol style="list-style-type: none"> 1. Community based wetland management plans that reflect communities' voices and are consistent with district wetland action plans are prepared. 2. Communities' awareness toward wetland conservation is enhanced. 3. At least 50% of pilot activity participants are satisfied with local government officers' technical instructions on sustainable livelihood options. 	<ul style="list-style-type: none"> - Project's periodical reports - Interviews and questionnaires to relevant community members 	<ul style="list-style-type: none"> - WMD and relevant district / sub-county officers continue to provide technical support for the wetland users. - Pilot activities are supported by target communities. - Sustainable Livelihood Options are not used to justify conversion of existing natural wetlands into human-made wetlands.
<ol style="list-style-type: none"> 5. Relevant policy reviewed for harmonized for implementation of wise use principle 	<ol style="list-style-type: none"> 1. Issues identified in the relevant policy, laws and regulations 2. Minutes of Workshop/Symposium 3. TOR for the next actions 	<ul style="list-style-type: none"> - Project's periodical reports - Interviews and questionnaires to relevant community members 	<ul style="list-style-type: none"> - Cooperation by other departments under MWE - Cooperation by MAAIF

⁸ A manual that describes proper methodology of wetland assessment, wetland management planning, sustainable livelihood options, etc.

⁹ Ministry of Water and Environment, Ministry of Agriculture, Animal Industry and Fisheries, National Environment Management Authority, Districts in charge of managing pilot sites.

NATIONAL WETLANDS MANAGEMENT PROJECT

Project Completion Report

Annex 3

<p>6. Wetland management officers¹⁰ capacity is strengthened.</p>	<p>1. At least 50% of the WMD officers and local government officers who are in charge of managing pilot sites can understand and utilize wetland management manuals. 2. At least 50% of the district officers in charge of wetland management over the country can understand and can use the wetland management manual.</p>	<p>- Project's periodical reports - Interviews and/or tests to relevant personnel</p>	<p>- No personnel changes occur. - Will of district wetland management officers is maintained.</p>
Activities			
<p>1-1 Consult with relevant institutions and organizations to identify scientific data and information gaps. 1-2 Review and redesign the National Wetland Information System. 1-3 Procure and install the best option of software and hardware. 1-4 Streamline the inventory format in line with the newly designed National Wetland Information System. 1-5 Test applicability of National Wetland Information System at relevant institutions and organizations. 1-6 Provide training on National Wetland Information System to staffs of relevant institutions and organizations.</p>	<p>Inputs: <u>Japanese Side</u> 1) Experts: - Chief Advisor / Wetland Management - Project Coordinator / Training and Extension - Ecosystem Conservation - Sustainable Rural Development - GIS / Database - Environmental Economics 2) Training: Technical training in Japan or third country for Ugandan project staffs 3) Equipment: -Vehicle(s) -Equipment necessary for wetland data collection</p> <p><u>Ugandan Side</u> 4) Ugandan Project Staffs: -Project Director -Project Manager -Project Coordinator -GIS/Database -Ecosystem Management -Sustainable Rural Development -Local Government Staffs 5) Furnished office in or near the WMD and relevant district government buildings 6) Existing data and information required for project implementation</p>	<p>Relevant institutions and organizations provide existing data required for project implementation. Districts and sub-counties in pilot wetland systems approve and make commitment for project implementation.</p>	
<p>2-1 Review existing scientific and socio-economic information. 2-2 Organize a district-led multi-disciplinary team to implement Detailed Resource Assessment. 2-3 Develop work plans for Detailed Resource Assessment. 2-4 Conduct Detailed Resource Assessment. 2-5 Update wetland inventory and enter data into the upgraded National Wetland Information System. 2-6 Design Decision Support System¹¹. 2-7 Link Decision Support System with National Wetland Information System and test applicability at relevant institutions and organizations.</p> <p>3-1 Organize Wetland System Planning Committees. 3-2 Review and update existing framework management plans. 3-3 Identify key issues in the target wetland systems. 3-4 Discuss countermeasures for key issues. 3-5 Wetland System Planning Committees develop framework management plans for the target wetland systems. 3-6 Develop Sub-county Wetland Action Plans with support from parish representatives. 3-7 Organize District Technical Planning Committees. 3-8 District Technical Planning Committees develop District Wetland Action Plans in each district. 3-9 Review and update Wetland System Management Plans, District Wetland Action Plans and Sub-county Wetland Action Plans</p>		<p>Preconditions: No drastic changes in wetland management policy occur. Project activities are accepted by relevant districts and sub-counties. Ugandan project staffs are assigned.</p>	
<p>4-1 Select pilot sites. 4-2 Organize community based wetland planning and management committees. 4-3 Develop community based wetland management plans with pilot communities. 4-4 Identify sustainable livelihood options together with the pilot communities. 4-5 Support the communities in implementing the Pilot Projects. 4-6 Develop and implement ecological monitoring plan. 4-7 Select Priority Pilot sites for Scaling Up 4-8 Assist Communities in Scaling Up 4-9 Review and update wetland management plans based on monitoring results.</p>			
<p>5-1 Review of relevant laws, regulation and guidelines to identify key issues; 5-2 Propose institutional adjustment for wise use 5-3 Develop TOR for the next actions 5-4 Convene workshop/Symposium to review and harmonize wetland policies</p>			

¹⁰ WMD staffs, wetland management officers at districts and sub-counties who are in charge of managing pilot sites, wetland management officers who work in other wetland systems.

¹¹ A system that supports decision making by providing basic information on socio-economic and ecological importance of a particular wetland.

6-1	Conduct capacity and training needs assessment.		
6-2	Develop a Wetland Management Manual.		
6-3	Develop and implement training programs.		
6-4	Conduct evaluation of training programs.		
6-5	Publish project deliverables		

添付資料 4 PROJECT DESIGN MATRIX (UPDATED) ON 9ST DECEMBER 2015

Project Name: National Wetlands Management Project

Duration: 2012 - 2016 (5 years)

Implementing Agency: Wetland Management Department (WMD), Ministry of Water and Environment Date: 9th December 2015

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
<p>Overall Goal: A model of conservation and wise use of wetlands is disseminated.</p>	Measures for conservation and wise use of wetlands introduced by the project are implemented in at least 1 wetland system other than the target wetland systems.	<ul style="list-style-type: none"> - Activity reports by WMD - and other relevant institutions and organizations 	<ul style="list-style-type: none"> - Relevant institutions and organizations maintain support for wetland management. - Wetland management officers utilize skills gained through the project's training. - Districts in other wetland system have budget to implement wetland management activities.
<p>Project Purpose: A model of conservation and wise use of wetlands is established.</p>	<ol style="list-style-type: none"> 7. Ecological character of the pilot sites shows no changes or improvement in pilot sites based on the ecological monitoring plans of each site. 8. At least 50% of the pilot activity participants adopt sustainable livelihood options introduced by the project. 3. Wetland Management Manual¹² is approved as one of the WMD's official document. 	<ul style="list-style-type: none"> - Project's periodical reports - Ecological Monitoring Reports - Interviews and questionnaires 	<ul style="list-style-type: none"> - Wetland related policies do not change drastically. - Large scale industrial development does not occur at selected wetland systems. - Trained wetland management officers continue to work for wetland management.
<p>Outputs:</p> <ol style="list-style-type: none"> 1. National Wetland Information System is upgraded and functional. 	<ol style="list-style-type: none"> 1. Data categories necessary for wetland management are added in the National Wetland Information System. 2. Relevant institutions and organizations¹³ are able to access the National Wetland Information System. 	<ul style="list-style-type: none"> - Project's periodical reports - User's guide for National Wetland Information System 	<ul style="list-style-type: none"> - Ugandan project staffs who acquired skills continue to work for WMD. - Budgetary support by WMD for maintaining computer programs including updating anti-virus programs continues.
<ol style="list-style-type: none"> 2. Scientific information of target wetland systems is available. 	<ol style="list-style-type: none"> 1. Detailed Resource Assessment report is developed and shared by relevant institutions and organizations. 2. Relevant institutions and organizations can utilize the data collected by the Detailed Resource Assessment for wetland management. 	<ul style="list-style-type: none"> - Detailed Resource Assessment Report - Project's periodical reports - Interviews and questionnaires to relevant personnel 	<ul style="list-style-type: none"> - Budgetary support by districts in the selected wetland systems for maintaining internet connection continue. - Decision-making based on scientific data prevails over political interference and pressure.
<ol style="list-style-type: none"> 3. Wetland management plans are prepared. 	<ol style="list-style-type: none"> 1. Framework management plans for two wetland systems are prepared. 2. District wetland action plans consistent with the framework management plans are prepared for at least 50% of districts in charge of managing pilot sites. 	<ul style="list-style-type: none"> - Project's periodical reports - Interviews to relevant personnel 	<ul style="list-style-type: none"> - Cooperation by all stakeholders is maintained. - Districts' political will is maintained. - Budgetary support and will of districts are maintained.
<ol style="list-style-type: none"> 4. Pilot activities for wise use of wetlands are implemented based on wetland management plans. 	<ol style="list-style-type: none"> 1. Community based wetland management plans that reflect communities' voices and are consistent with district wetland action plans are prepared. 2. Communities' awareness toward wetland conservation is enhanced. 3. At least 50% of pilot activity participants are satisfied with local government officers' technical instructions on sustainable livelihood options. 	<ul style="list-style-type: none"> - Project's periodical reports - Interviews and questionnaires to relevant community members 	<ul style="list-style-type: none"> - WMD and relevant district / sub-county officers continue to provide technical support for the wetland users. - Pilot activities are supported by target communities. - Sustainable Livelihood Options are not used to justify conversion of existing natural wetlands into human-made wetlands. - The District Officers in charge of Pilot Projects support the community and promote wise use principle in wetland management through self-initiative and self-help efforts.

¹² A manual that describes proper methodology of wetland assessment, wetland management planning, sustainable livelihood options, etc.

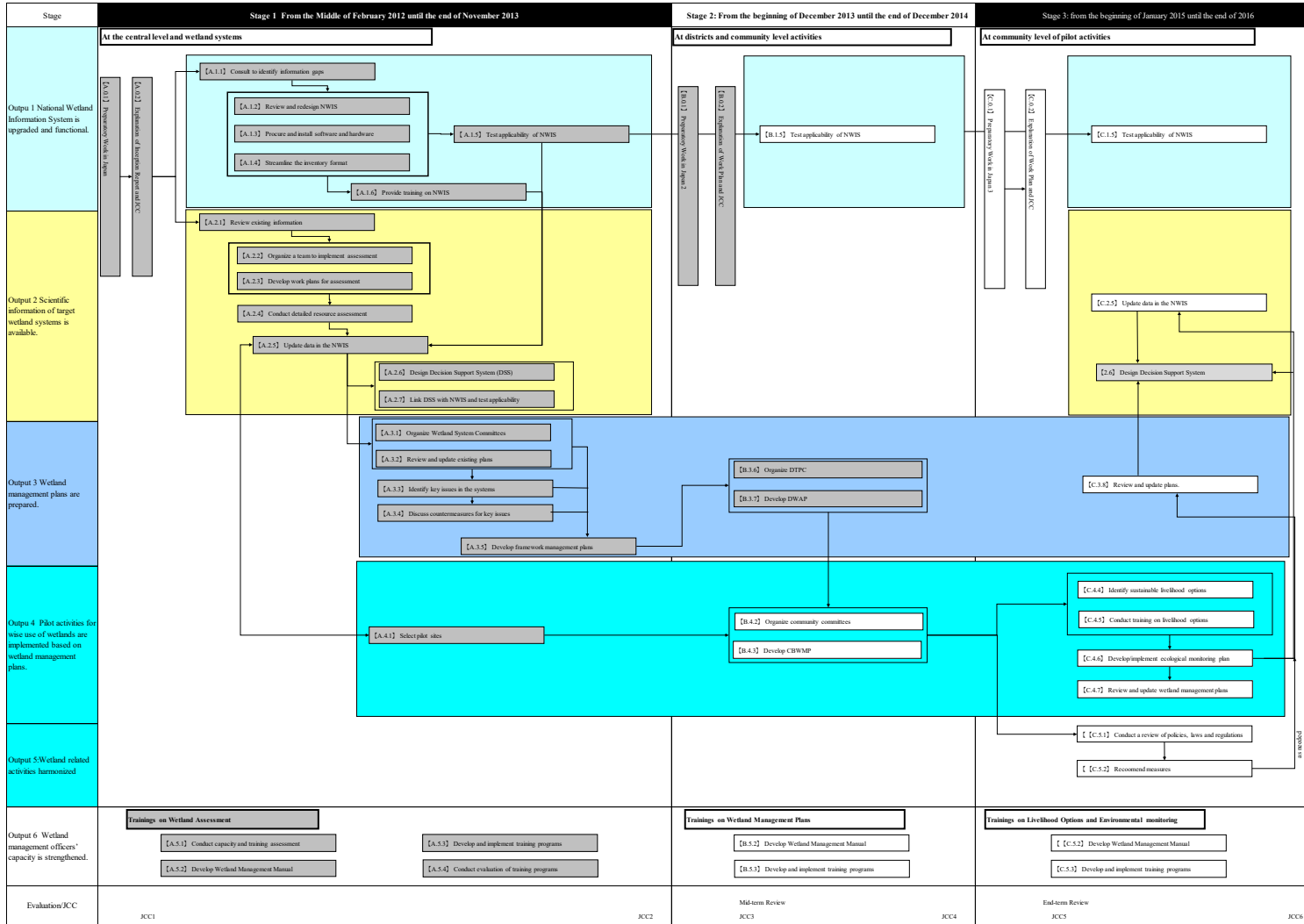
¹³ Ministry of Water and Environment, Ministry of Agriculture, Animal Industry and Fisheries, National Environment Management Authority, Districts in charge of managing pilot sites.

5. Wetland related activities harmonized	1. Issues identified in the relevant policy, laws and regulations 2. Minutes of Workshop/Symposium	- Project's periodical reports - Interviews and questionnaires to relevant community members	- Cooperation by other departments under MWE - Cooperation by MAAIF
6. Wetland management officers ¹⁴ capacity is strengthened.	1. At least 50% of the WMD officers and local government officers who are in charge of managing pilot sites can understand and utilize wetland management manuals. 2. At least 50% of the district officers in charge of wetland management over the country can understand and can use the wetland management manual.	- Project's periodical reports - Interviews and/or tests to relevant personnel	- No personnel changes occur. - Will of district wetland management officers is maintained.
Activities			
1-1 Consult with relevant institutions and organizations to identify scientific data and information gaps. 1-2 Review and redesign the National Wetland Information System. 1-3 Procure and install the best option of software and hardware. 1-4 Streamline the inventory format in line with the newly designed National Wetland Information System. 1-5 Test applicability of National Wetland Information System at relevant institutions and organizations. 1-6 Provide training on National Wetland Information System to staffs of relevant institutions and organizations.	2-1 Review existing scientific and socio-economic information. 2-2 Organize a district-led multi-disciplinary team to implement Detailed Resource Assessment. 2-3 Develop work plans for Detailed Resource Assessment. 2-4 Conduct Detailed Resource Assessment. 2-5 Update wetland inventory and enter data into the upgraded National Wetland Information System. 2-6 Design Decision Support System ¹⁵ . 2-7 Link Decision Support System with National Wetland Information System and test applicability at relevant institutions and organizations.	Inputs: <u>Japanese Side</u> 1) Experts: - Chief Advisor / Wetland Management - Project Coordinator / Training and Extension - Ecosystem Conservation - Sustainable Rural Development - GIS / Database - Environmental Economics 2) Training: Technical training in Japan or third country for Ugandan project staffs 3) Equipment: -Vehicle(s) -Equipment necessary for wetland data collection	<u>Ugandan Side</u> 7) Ugandan Project Staffs: -Project Director -Project Manager -Project Coordinator -GIS/Database -Ecosystem Management -Sustainable Rural Development -Local Government Staffs 8) Furnished office in or near the WMD and relevant district government buildings 9) Existing data and information required for project implementation
3-1 Organize Wetland System Planning Committees. 3-2 Review and update existing framework management plans. 3-3 Identify key issues in the target wetland systems. 3-4 Discuss countermeasures for key issues. 3-5 Wetland System Planning Committees develop framework management plans for the target wetland systems. 3-6 Develop Sub-county Wetland Action Plans with support from parish representatives. 3-7 Organize District Technical Planning Committees. 3-8 District Technical Planning Committees develop District Wetland Action Plans in each district. 3-9 Review and update Wetland System Management Plans, District Wetland Action Plans and Sub-county Wetland Action Plans	4-1 Select pilot sites. 4-2 Organize community based wetland planning and management committees. 4-3 Develop community based wetland management plans with pilot communities. 4-4 Identify sustainable livelihood options together with the pilot communities. 4-5 Support the communities in implementing the Pilot Projects. 4-6 Develop and implement ecological monitoring plan. 4-7 Select Priority Pilot sites for Scaling Up 4-8 Assist Communities in Scaling Up 4-9 Review and update wetland management plans based on monitoring results.		Relevant institutions and organizations provide existing data required for project implementation. Districts and sub-counties in pilot wetland systems approve and make commitment for project implementation. Preconditions: No drastic changes in wetland management policy occur. Project activities are accepted by relevant districts and sub-counties. Ugandan project staffs are assigned.
5-1 Conduct a review of sectoral policies, laws and regulations 5-2 Recommend measures for strengthening policy framework and instruments			
6-1 Conduct capacity and training needs assessment. 6-2 Develop a Wetland Management Manual. 6-3 Develop and implement training programs. 6-4 Conduct evaluation of training programs. 6-5 Publish project deliverables			

¹⁴ WMD staffs, wetland management officers at districts and sub-counties who are in charge of managing pilot sites, wetland management officers who work in other wetland systems.

¹⁵ A system that supports decision making by providing basic information on socio-economic and ecological importance of a particular wetland.

添付資料 5 PROJECT FLOWCHART



添付資料 6 GENERAL MANAGEMENT POLICY FOR EACH OF THE MAJOR SOIL TYPES

Soil Class	Overview	General Management Policy
1. Histosols	Histosols comprise soils formed in organic material. In Uganda, the soils are often found under the vegetation of papyrus, reeds and sedge in lowlands.	It is desirable to protect and conserve fragile peat lands because of their intrinsic value (especially their common function as sponges in regulating stream flow and in supporting wetlands containing unique species of animals) and because prospects for their sustained agricultural use are meagre. Where their use is imperative, sensible forms of forestry or plantation cropping are to be preferred over annual cropping, horticulture or, the worst option, harvesting of the peat material for power generation or production of horticultural growth substrate, active carbon, flower pots, etc.
2. Gleysols	Gleysols are wetland soils that are saturated with groundwater for long enough periods to develop a characteristic gleyic colour pattern. This pattern is essentially made up of reddish, brownish or yellowish colours at ped surfaces and/or in the upper soil layer or layers, in combination with greyish/bluish colours inside the peds and/or deeper in the soil.	Gleysols can be well used for wetland rice cultivation where surface water is managed. Supply of cation from upstream is often an advantage for paddy rice production. In riverine wetlands, some parts of Gleysols are not water saturated in dry season and provide farm land for dairy farming and horticulture as groundwater table lowers. However, soil structure will be destroyed for a long time if soils are cultivated when too wet. Therefore, Gleysols in depression areas with unsatisfactory possibilities to lower the groundwater table are best kept under a permanent grass cover or swamp forest. For upland crop production, the main challenge is its high water table that prevents most of upland crop production. Adequately drained Gleysols can be used for arable cropping, dairy farming and horticulture. Liming of drained Gleysols that are high in organic matter and/or of low pH value creates a better habitat for micro- and meso-organisms and enhances the rate of decomposition of soil organic matter. Gleysols can be put under tree crops only after the water table has been lowered with deep drainage ditches. Alternatively, the trees are planted on ridges that alternate with shallow depressions in which rice is grown.
3. Vertisols	Vertisols are churning, heavy clay soils with a high proportion of swelling clays. These soils form deep wide cracks from the surface downward when they dry out, which happens in most years. The name Vertisols (from Latin <i>vertere</i> , to turn) refers to the constant internal turnover of soil material.	<p>These soils have considerable agricultural potential, but adapted management is a precondition for sustained production. The comparatively good chemical fertility and their occurrence on extensive level plains where reclamation and mechanical cultivation can be envisaged are assets of Vertisols. Their physical soil characteristics and their difficult water management cause problems. Buildings and other structures on Vertisols are at risk, and engineers have to take special precautions to avoid damage.</p> <p>The agricultural uses of Vertisols range from very extensive (grazing, collection of fuelwood, and charcoal burning) through smallholder post-rainy season crop production (millet, sorghum, cotton and chickpeas) to small-scale (rice) and large-scale irrigated agriculture (cotton, wheat, barley, sorghum, chickpeas, flax, noug [<i>Guzotia abyssinica</i>] and sugar cane). Cotton is known to perform well on Vertisols, allegedly because cotton has a vertical root system that is not damaged severely by cracking of the soil.</p> <p>Tree crops are generally less successful because tree roots find it difficult to establish themselves in the subsoil and are damaged as the soil shrinks and swells. Management practices for crop production should be directed primarily at water control in combination with conservation or improvement of soil fertility. The heavy soil texture and domination of expanding clay minerals result in a narrow soil moisture range between moisture stress and water excess. Tillage is hindered by stickiness when the soil is wet and hardness when it is dry. The susceptibility of Vertisols to waterlogging may be the single most important factor that reduces the actual growing period. Excess water in the rainy season must be stored for post-rainy season use (water harvesting) on Vertisols with very slow infiltration rates. One compensation for the shrink-swell characteristics is the phenomenon of self-mulching that is common on many Vertisols. Large clods produced by primary tillage break down with gradual drying into fine peds, which provide a passable seed bed with minimal effort. For the same reason, gully erosion on overgrazed Vertisols is seldom severe because gully walls soon assume a shallow angle of repose, which allows grass to become re-established more readily.</p>

Source: IUSS Working Group WRB. 2007. World Reference Base for Soil Resources 2006, first update 2007. World Soil Resources Reports No. 103. FAO, Rome.

添付資料 7 SELECTION CRITERIA FOR PILOT PROJECTS

Dimensions		Rate	Criteria
Readiness and preparedness of the project participants	Project ownership is an important aspect to be considered. The project participants shall be ready to implement the activities. Presence of relevant entities and their capacity to implement the activities should be evaluated.	1	The beneficiaries haven't thought of the idea of the project.
		2	The project was proposed by the beneficiaries. The project was subsequently designed and guided by the officers/JICA or other entities.
		3	The beneficiaries have already prepared a consensus on the proposed project/activities.
		4	The beneficiaries have already organized a project entity to implement the project.
		5	The beneficiaries have already initiated the relevant activities by either their own initiative or support from external entities.
Consistency with project design / Wise-Use Concept	The conservation and sustainable use of wetlands and their resources, for the benefit of humankind.	1	The project would aggravate wetland ecosystem integrity or biological diversity.
		2	The project does not have any components that contribute to conservation of the wetlands.
		3	The project is designed to contribute to improvement of livelihood of the wetland users but not to contribute to the conservation and sustainable use of wetlands.
		4	The project is designed to contribute directly to livelihood improvement of the wetland users but indirectly to conservation of wetlands or biodiversity.
		5	The project is designed to contribute both to 1) the conservation and sustainable use of wetlands and their resources and 2) for the benefit of humankind.
Financial / Economic viability	JICA is able to support only small scale project as pilot activity under the project. 100 million shillings is not definite value but should be viewed as a guide. Smaller is better.	1	The initial investment cost goes beyond 100 million shillings at one site.
		2	Either one of the following conditions: 1) The project does not include any mechanisms to ensure sustainability, or 2) the project requires external financial support for long-term operation of the proposed activity.
		3	The project requires external financial support for long-term operation of the proposed activity. But sustainability mechanisms are already in place.
		4	The project is financially feasible and economically viable with a certain level uncertainty.
		5	The project is believed to be promising in term of economic and financial aspects. No uncertainty is so far identified.
Technical feasibility	Venture activity should be avoided. If technical feasibility is not demonstrated, the projects may include small scale feasibility study components.	1	Applicable technology is not available.
		2	There is applicable technology but not demonstrated to be feasible.
		3	There is applicable technology that is demonstrated to be feasible elsewhere in the world. But its efficacy is uncertain in the specific case.
		4	There is applicable technology that is demonstrated to be feasible in the Eastern African Countries. But its efficacy is uncertain in the specific case.
		5	The technology adopted is already demonstrated in the area.
Environmental impacts	The project shall not have significant impacts particularly in the internationally important sites. Introduction of alien species should be carefully avoided.	1	The project has significant environmental impacts that are not avoidable.
		2	The project impact is uncertain.
		3	The project has adverse environmental impacts but they are to be avoided and/or minimized.
		4	No adverse impact is identified.
		5	No adverse impact is identified and the project has positive impacts on the environment.

Some Terminology in Environmental Impact Assessment

Positive impacts - the effect of the given project activity will be to improve the condition and integrity of the environmental resource.

No Impact - there is no impact of the given project activity on the environmental resources. This assessment would be made if the project activity is to be spatially or temporally removed from the environmental resource.

Insignificant - There is an impact of the given project activity on the environmental resource but it is assessed to be too negligible to require intervention in the form of either mitigation or monitoring. This type of impact would occur under at least one of three following conditions: the time scale of the impact is shorter than the life span or time scale of the environmental resource; the area which the impact may occur is smaller than the area over which the environmental resource occurs; or the magnitude of the impact is small relative to the abundance or quality of the environmental source.

Significant and Unavoidable impact - There is an impact of the given project activity on the environmental resource, it is assessed to be sufficiently large that mitigation intervention is desirable, but there are no mitigation measures available or their effectiveness is uncertain. Monitoring would almost certainly be required and monitoring activities would need to be specified and costed. This type of assessment would occur under the following conditions:

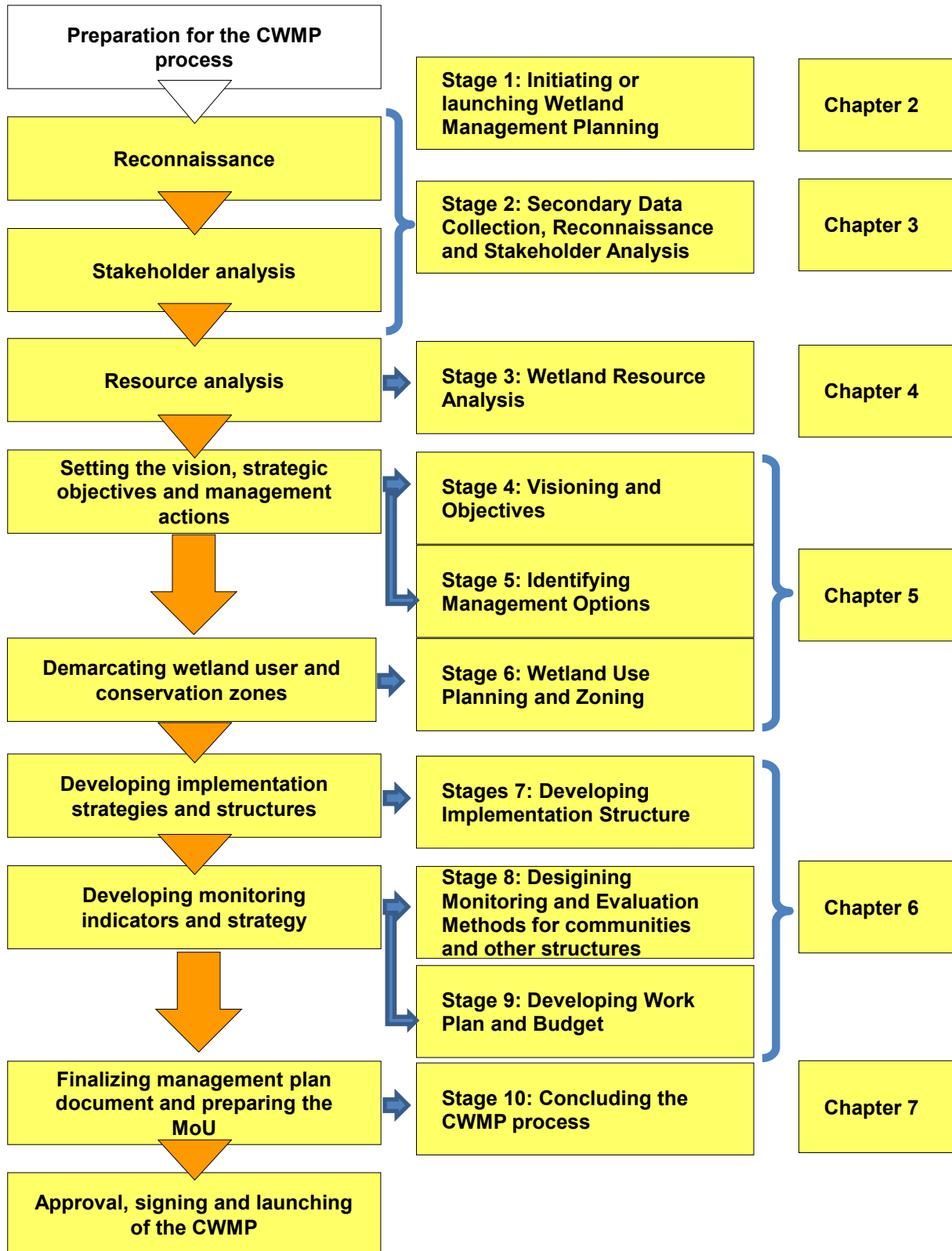
* any one of:

- the time scale of the impact is equal to or longer than the life span or time scale of the resource of concern
- the area over which the impact may occur is equal to or larger than the area over which the resource of concern occurs
- the magnitude of the impact is equal to or larger relative to the abundance or quality of the resource of concern
- the resource of concern has international or global significance, (e.g. an endangered species or international waterway)

* and any one of the following:

- there are no known mitigation measures
- it is uncertain whether the significant impact can be effectively mitigated

添付資料 8 BASIC STEPS IN THE COMMUNITY WETLAND MANAGEMENT PLANNING PROCESS



添付資料 9 DESCRIPTION OF INCOME GENERATION ACTIVITY

BUDUDA DISTRICT

Bumatanda Women Group in Bukigai Subcounty was supported in improving post-harvest processing of honey products to enhance the market competitiveness by maximizing value-addition of bee products to respond to growing needs on bee products in the districts, Mbale and other consumers' markets in Kenya. A certain range of the incremental earnings from the investment would be set aside for two major purposes: 1) saving for business operation to ensure the operation sustainable and thus reduce dependence on external assistance and 2) reallocate fund for increasing forest coverage of the bank area and thus promote good floral diversity to enhance the productivity of bees.

The members of the community have engaged in the bee keeping activity in a forested bank of the river Manafwa and have been the major contributor to the wetland demarcation and mapping activities to ensure bank protection of the river. It currently holds 108 bee hives to produce approximately 726 kg honey, 1,080 kg wax, 21.6 kg propolis in two consecutive harvest seasons of a single year.

They will be trained on skills and techniques on handling and processing of products. Some of the representatives will participate in a training program to familiarize themselves to fundamentals and essentials on bookkeeping and accounting. They will further be provided with a minimum set of equipment for improvement of honey quality. A set of bee veils and overalls were also provided

The members will also contribute to increasing production of honey, wax and propolis by additionally hosting honeybee hives in the vicinity of the current operation ground. Each member will have additionally two bee hives with locally available materials. However the approach in boosting the production would adopt a step-by-step process over 10 years to ensure that implementing entities gradually gain confidence and later embark on a much wider and thorough application.

MANAFWA DISTRICT

Nabaloosi wetland lies on a mountainous area at an elevation of approximately 1,230 m a.s.l., which provides favourable conditions for livestock farming with limited exposure to any critical cattle diseases¹⁶. The wetland also provides a mineral lick supplementing their diet with nutrients and minerals; and cattle bathing sites to control ticks, an external parasite, and manage emergence of trypanosomiasis.

For livelihood improvement, the community was provided with incalf heifer of a 75 per cent cross-breed of locally bred Holstein-Friesian cattle that may produce a calf within 3 to 5 months to be delivered to other project participants. It is assumed that the average sex ratio is expected to be 1.06 males per every female born in large populations of cattle¹⁷.

The plan initially selected one or two farm household(s) from each of the five (5) villages within the community to be provided with one incalf heifer. At this stage, the district veterinarian selected farmers by using predetermined criteria on 1) availability of fodder, 2) availability of shelter, 3) technical competence and 4) willingness to learn. Upon the delivery of a calf, it will be delivered to additional one or two selected farm households. The selected farm household will be also provided with a full technical package of contour farming and grass strip and use of manure in addition to the incalf heifer. Artificial insemination service will be provided by a district veterinarian. Although the current cows in the district are dominantly 45% Holstein Friesian cattle; the breeding with 75% Holstein Friesian cattle will be realized to increase milk production from 5-6 L/day to 10-15 L/day. Dissemination of sustainable agricultural practices over the hilly slope area would be also supported to conserve soil and water. According to the district veteran, a cow is able to produce milk for every 9 months each year for a period of five years; and may produce 6 L/day of milk for sale at UGX 1,000/L in the area. After five years, a cow can be sold at UGX 700,000 locally. A bull can be sold at UGX 1.5 to 2.0 million at 2 years old. These information will be used for economic analysis of the component.

¹⁶ They include : Mastitis, Food rot, Helminthiasis and anaplasmosis.

¹⁷ Rupert Amann & George Seidel, Jr., <http://beefmagazine.com/mag/sex_ratio_riddle> [Accessed 25th November, 2015]

BUTALEJA DISTRICT, PALLISA DISTRICT and BUDAKA DISTRICT

The communities in the three districts choose fish farming as the livelihood option considering the fact that the areas have been devoted to rice cultivation and diversification of production is a critical issue.

In Butaleja district, Bughajji wetland lies in the proximity to the confluence of three rivers of Manafwa, Nakwasi and Namatala. It had been previously extensively covered by papyrus. The members of the Wetland Management Committee had used the wetlands for agricultural purposes up the very edge of the river bank. However they participated in the planning process and subsequently demarcation exercise to set a side of protection and regulated zones.

In Pallisa District, the community of Doko wetland in Kabwangasi Sub-county in Pallisa District took up activities to enhance inland fishery cultivation. The advantage of their engagement in fish cultivation is geographical proximity to the markets in Mable. However it must be bear in mind that the previous exposure of the community in inland fish cultivation is limited. The Wetlands Management Department has minimized the risk by narrowing down the scope of the investment and closely monitor the implementation process to maximize the probability for success.

The community has set a goal of the first year to commence the production; and to increase its production and sales throughout the project life of 10 years. The members previously proposed to commence the activity to produce and sell 20,000 fishes in the initial year by excavating two ponds. However it was scaled down to a half of the proposal though a consultation process to start with one pond that is capable of growing 5,000 fishes in one season and 10,000 fishes in one single year. It is generally believed that fish products in Mbale and elsewhere in the wetland system has been scanty due to limited accessibility to major fishing communities in and around the Kyoga. Most people in the area therefore believe that the market is in high demand of fish and absorbable any incremental production by small scale fish ponds. However the project will take a cautious approach in increasing production accompanied by close monitoring and supervision. In the initial year, the district will support the community by providing a survey and engineering service to identify the best site for fish pond in the wetlands. This component was seen as a critical factor because the wetland area is prone to flood occurrence. District fishery officers carried out training to the members on production and management of inland fish culture. Community members were mobilized to excavate 1 pond of 1000 square meter. Fingerlings, feed and fuel for the initial operation was also supported by the project. However, the community will shoulder such operation cost from the second year by setting aside a certain amount of earnings from the sales of the initial year.

In Budaka district, the wetland management committee in Nyanza has engaged in inland fish culture with the technical support of Swisscontact, an NGO operating in Budaka. The members of the community have been the major player to the wetland demarcation and mapping activities. The community was supported in a way to increase the income by operation of the fish culture. However the approach of the Nynza community in improving the livelihood is different from those in Butaleja and Pallisa because they have already reached a certain level of production and sales. The support provided under the project is improvement of marketing side rather than the production side. In the livelihood improvement component under the project, the community was supported in undertaking a market survey. The output of the survey would serve as basis for further decision on investment for water control structure, purchase of marketing equipment. In this project, representatives of the community collaborated with the district officers in undertaking a series of interview of vendors at Mbale Central Market, street vendors, retail markets and hotels in Mbale on the sales and purchase of fish products.

KIBUKU DISTRICT

The Kirika Wetland Association has recently engaged in rice production at the edge of papyrus wetlands. It is desirable to protect and conserve fragile papyrus lands because of their intrinsic value especially their common function as sponges in regulating stream flow and in supporting wetlands containing unique species of animals. It is noteworthy that the wetland edge they have used has a shallower water table than the area vegetated with papyrus. The one of the key challenge in wetland management of the community has been limited planning process in planting and technical support on production of rice and other crops grown in the area. The project has supported the community in

demarcating the wetlands to have broad category of zones: protection zones and regulated zone. The regulated zones are permitted to serve for a certain group of activities that have a limited impacted on papyrus vegetation as agreed by the community members in its MOU.

The livelihood option of the community is thus designed to identify best mix of technique in producing rice in the vicinity of papyrus area through a participatory research and decision making process. It is expected eventually to replace the varieties currently grown, namely China, Super and Buyu with K85, Wita 9 and IR 16. The benefit of the project include: increased yields and price of rice as a result of better farm management and the proposed replacement of varieties. To this end, the community will have a demonstration farm where three rice varieties will be tested on its adaptability to such environment, yield and economies to the households along with environmental impacts.

SIRONKO DISTRICT

The fundamental objective of this project is to minimize accelerated stream bank erosion that has led to a disproportionate sediment supply, stream channel instability, land loss, habitat loss and other adverse effects by setting aside a buffer zone along the River Nalugugu in line with the National Environmental Regulations. The community has already undertaken the demarcation to set aside the protection zones along with the regulated zones along the river.

The proposed component is to provide irrigation pump to increase irrigation service area. With the project scenario, it was assumed that one household will be able to expand 25 % of farm land (25m x 50m) at a distant place from the previous cultivated land area with irrigation equipment. Farm productivity will also be increased as a result of provision of a pump by means of stabilized and equitable supply of irrigation water over the farm land during the dry season and supplemental supply of irrigation water during the two rainy seasons that are characterized by more erratic and unpredictable precipitation pattern due to global warming affecting the entire region. Organizational aspects of the pump operation were also designed as follows: 1) a pump is jointly operated by 7 households having farms in a contiguous land area; 2) they reach a mutual agreement on timing and a rental charge.

KAPCHORWA DISTRICT

To contribute to the socio economic well-being of the community of Tartar wetland catchment, the community has proposed tree planting activity. The wetland lies in the proximity to high gradient areas in the micro-catchment that have been converted to farm land without any soil and water conservation measures. The proposed tree planting activity is to prevent significant soil erosion that has affected the downstream wetlands by obstructing stream and drainage channels, filling in reservoirs and degrading water quality. The community intends to have the top of the mountainous covered with *Grevillea*, a fast-growing evergreen tree, and *Sesbania*, often used in alley cropping to increase the soil's nitrogen content. The hill side will be used for crop production such as matoke; though, they will be combined with contour band by using nepia grass with a 15 meters interval along the slope. The plan is designed to start with the critical area for demonstration purpose. Thus identification of critical area will be an integral part of the activities. A tree nursery association will be supported and would be registered to the district government as a Community Based Organization for purchasing and sales of tree seedlings. The tree seedlings would include pine trees, eucalyptus, grandis in addition to *Grevillea* and *sesbania*. Other fruits trees such as avocado, jackfruits and mango will also promoted to enhance livelihood of the community.

BISINA LAKE Wetland Management – Katakwi, Soroti, Ngora and Kumi

The activities in Akurao parish in Toroma S/C and Kokorio parish in Kapujan S/C of Katakwi District will be extended over the entire lake as a lake wide activity among the riparian communities in Soroti, Ngora and Kumi Districts with a total distance of over 100 km. The activities in the year 2016 will be composed of major three components:

Component 1) Activation of the wetland committees,

Component 2) Demarcation of wetlands, and
Component 3) Implementation of enforcement.

The component 1: The component will include the activities for activation of wetland management committees that will function as entities to formulate and enforce community rules and regulation for sustainable fishing activity. The members are expected to adhere to and for which they are liable for punishment in case of disobedience. The rules and regulation will be designed to regulate use of smaller mesh size of nets. Through the consultation process with the communities, other regulations such as fishing holidays will be put into place.

The component 2: The component is a series of activities for demarcating wetlands and riparian zoning for conservation of wetland resources. The activity in the year 2015 for the two landing sites in Katakwi has completed approximately 10 km of demarcation along the beach of the Bisina Lake in a matter of a few months. A total of 100 km demarcation is thus considered to be feasible. The current riparian land use is unplanned and uncontrolled, which has thus brought about physical destruction of fish habitat, including spawning grounds, and intensified potential conflict over the wetland resources between fishermen and cattle grazers. Farming activity, on the other hand, has been practiced in the proximity to the shoreline, which has increased sedimentation of the riparian zone and consequently changed the vegetation composition that were not favourable for increasing fish resource base. The component will support the communities in setting aside a protection zone and demarcate user zones for landing site, grazing land, fish spawning ground, and seasonal fishing area particularly for women.

Component 3: A motorized boat will be provided for undertaking patrol activity to one district among the four districts as its owner. But the roles and function for patrol will be commissioned to a wetlands users' association. To this end, a Lake-wide association of the wetland users' committee shall also be designed and established. The community will be allowed to use the boat for income generating activities such as passenger transport to cover the fuel cost for patrol operation.

添付資料 10 IMPLEMENTATION GUIDELINES

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

WETLAND MANAGEMENT IMPLEMENTATION
GUIDELINE

MANAGEMENT MODEL

SEPTEMBER 2016

CHAPTER1 INTRODUCTION

This is the guideline for implementation of wetland management in Uganda. Key lessons were drawn from the implementation of the National Wetlands Management Project.

The target audience of this guideline comprises mainly officers in charge of wetlands at district level as well as the Ministry of Water and Environment in Uganda. Readers of this guideline are advised to refer to the following guidelines as well to capture general flow and some skills and detailed technical aspects. The manuals and this guideline should be used in tandem to maximize its benefit.

- ✓ WETLAND MANAGEMENT PLANNING PROCESS MANUAL
- ✓ SUB-COUNTY AND DISTRICT WETLAND ACTION PLANS DEVELOPMENT MANUAL

The following chapter provides fundamentals in managing wetlands in Uganda first recognizing diversity of wetlands in Uganda. Five key elements in Managing Wetlands were identified. They are 1) River Basin Approach, 2) Setting up Protection Zones along Water Bodies. 3) Use and Management of Information, 4) Problem Solving Approach integrated with IGA and 5) Monitoring and Assessment.

Chapter 3 provides lessons in wetlands management in Uganda. Fifteen (15) key lessons drawn from the field experience are compiled into a matrix. The annex provides additional information such as conceptual illustration of wetland demarcation and its application and evaluation criteria for prioritization of community's IGAs.

CHAPTER2 Wetlands Management In Uganda

2.1 Diversity in Ugandan Wetlands

Wetlands in Uganda are, at first glance, predominantly riverine wetlands that are found along flowing waters - from headwaters to large rivers downstream. In fact, however, there occur diverse wetland classes ranging from slope wetlands¹⁸ found throughout mountainous regions especially in the circumstances where there is a discharge of groundwater to lacustrine fringe wetlands lying adjacent to lakes. Along the course of waterway, mineral soil flats are developed as a result of long-term deposition of sediments from the upper streams; and organic soil flats often developed in association with papyrus vegetation.

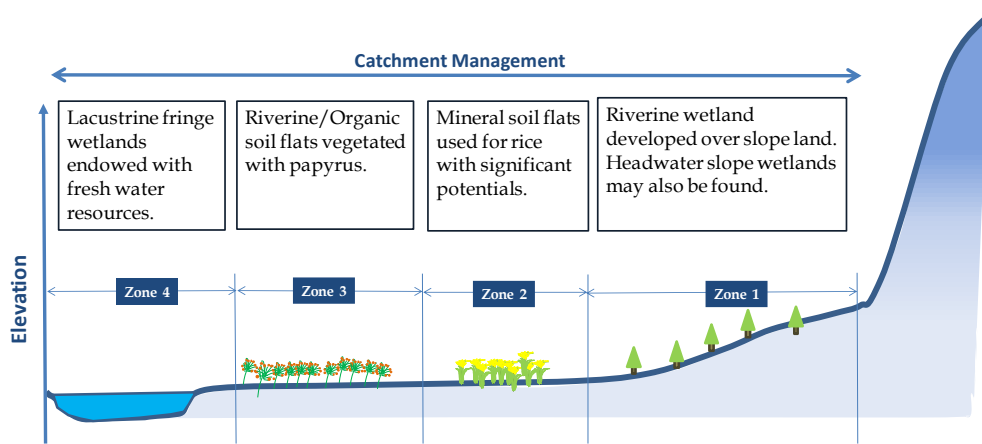


Figure 1 Diversity in Ugandan Wetlands

2.2 Five Key Elements in Managing Wetlands in Uganda

2.2.1 River Basin Approach

For management of wetlands, river basins are important geographical units. This is because wetlands play critical roles acting as a sponge and aiding in flood protection and groundwater recharge, by absorbing water during the wet season and slowly releasing it during the dry season. Wetlands also help keep the river clean, by acting as a filtration system, trapping nutrients, like phosphorus and nitrogen, as well as sediments¹⁹.

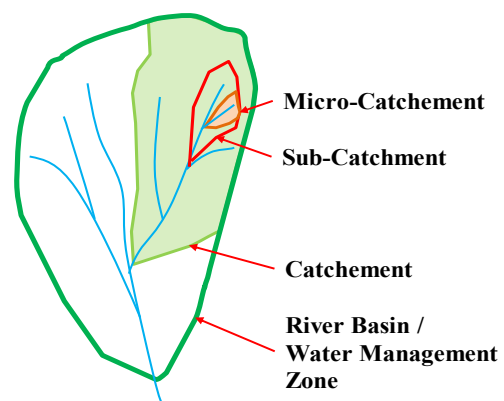


Figure -2 General Terminology in River Basin Approach in Uganda

¹⁸ Slope wetlands are the wetlands often found in mountainous areas. They are more specifically found where there is a discharge of groundwater to the land surface. They normally occur on sloping land; elevation gradients may range from steep hillsides to slight slopes. Please refer to Figure A 4 for more details.

¹⁹ Integrated River Basin Management (IRBM), A holistic approach, Retrieved on 9th August 2016, from http://wwf.panda.org/about_our_earth/about_freshwater/rivers/irbm/

Conversely, land and water-related human activities within river basins can have very significant influences on the ecological character of wetlands in those basins²⁰. Wetlands in Uganda should be planned and managed by the river basin approach wherever the circumstances allow doing so. It may be carried out at catchment, sub-catchment or micro-catchment levels in accordance with the terminology²¹ generally used in Uganda. However this does not mean that all planning and management process must adopt such physiographic units. Instead, they should be carried out with due consideration on the upstream and downstream activities, communities and impacts with a certain extent of flexibility to maximize resource use.

2.2.2 Setting up Protection Zones along Water Bodies

Protection zone for river banks as mandated by the National Environment (Wetlands, River banks and lakeshore management) Regulations, 2000, is a fundamental and effective measure for protection of downstream wetlands from accelerated sedimentation and conservation of biological diversity by connecting increasing connectivity of fragmented habitats.

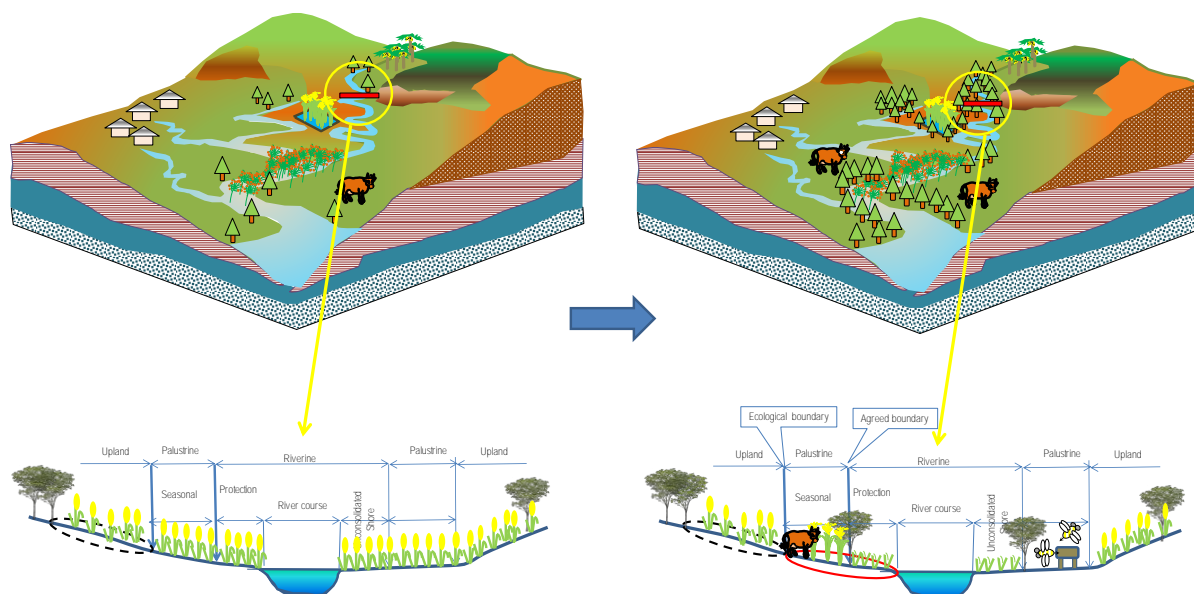


Figure -3 Bank protection - a key contributor to protect downstream wetlands

A strip of land along river bank may have been used for intensive crop production without any appropriate plan and protection. Article 29 of the regulation set forth protection zone. Community based wetland planning process constitute a prerequisite for determining the size of the protection zone, which would be integrated with land use planning process.

²⁰ Ramsar Convention Secretariat, 2010. River basin management: Integrating wetland conservation and wise use into river basin management. Ramsar handbooks for the wise use of wetlands, 4th edition, vol. 9. Ramsar Convention Secretariat, Gland, Switzerland.

²¹ Louis Mugisha, Catchment Management and Water Source Protection, Kyoga WMZ Directorate of Water Resources Management, Retrieved on 8th September 2016, from http://www.ircwash.org/sites/default/files/catchment_management_and_water_source_protection-_for_irc.pdf

Use and Management of Information

Objective information is crucial in managing natural resources in a wise manner. The Wetlands Management Department has developed National Wetlands Information System, NWIS, to allow users to access fundamental wetland information. NWIS contains information at national and regional scale on wetlands coverage, monitoring sites, rivers, lakes, road network, protected area, soil map and land cover map. Anyone who has internet access is able to access wetlands information at

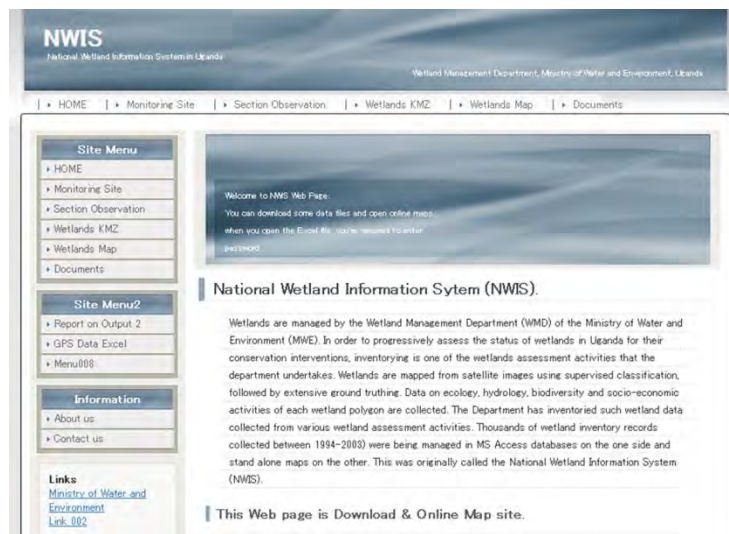


Figure -4 Wetland Information in Uganda accessible on Internet

<https://dl.dropboxusercontent.com/u/159531982/sample7/index.html> .

NWIS is also equipped with a Decision Support System for wetland management. The DSS is able to extract information in an arbitrary designated area to provide information on desired management options. The area may include those categorized as wetland(s) in combination with upland area contiguous to the wetland(s).

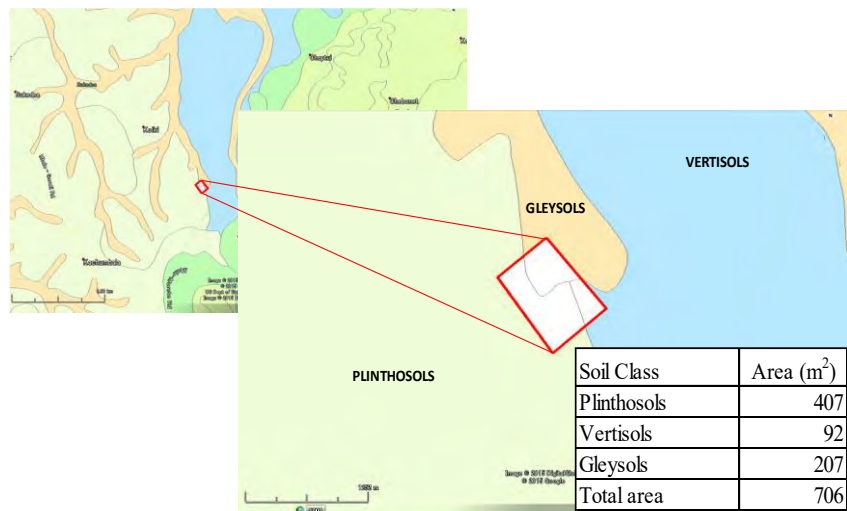


Figure 5 Conceptual Illustration of DSS

The DSS would be used to derive information on management option in a proposed development area.

The DSS is developed through a few consecutive stages to start with soil types that would provide management options as exemplified in the table below. It will further integrated with other decision process such as wetland type and status as defined in the Kampala Matrix. Development of NWIS is evolving process and will be updated when new information becomes available. Full-fledged access is granted only for information system analysts of the Assessment and Data Management Section of the department. However

2.2.4 Problem Solving Approach integrated with IGA

Diverse wetlands may be found along the catchment from the upstream to downstream as illustrated in the figure below. Key issues and approaches to address them in managing wetlands should be unique and specific according to local physical and socioeconomic settings and, which would not allow overgeneralization and does not have any panacea. However there are often common issues and challenges in similar ecological settings. In the case of Doho-Namatala and Awoja Wetland Systems, the wetlands system may be categorized into five major geographical zones depending mostly on elevation which is linked to landforms such as floodplains and alluvial fans, and geomorphic processes such as stream erosion and deposition. Each zone has unique wetland management issues that are not found and comparable in other zones of the same wetland systems, which would also require unique approach to solve the problems. The wetlands management plans should be therefore designed to solve such specific issues and challenges of each area based on the information that will become available through planning process.

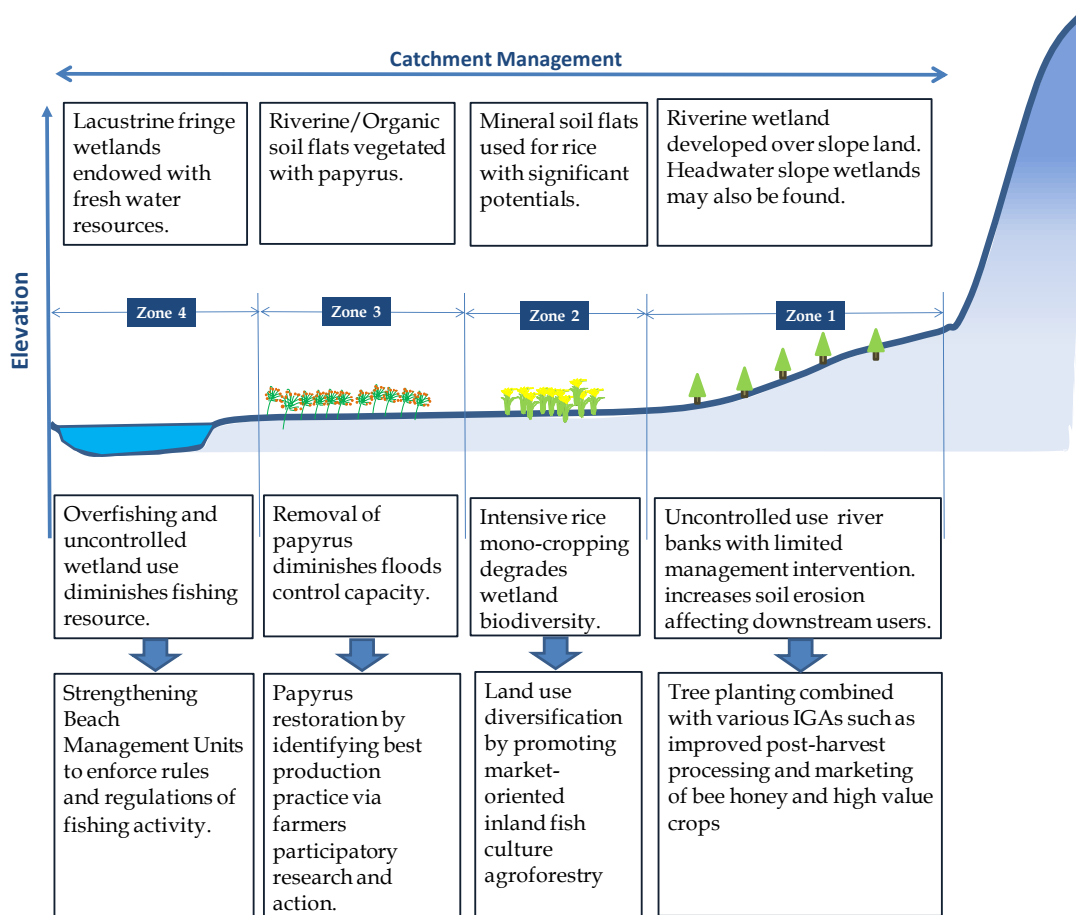


Figure 6 Integration of wetland conservation and wise use into river basin management

Integration of Income Generation Activities (IGA) is of vital importance in realizing financial sustainability especially at community level. The management plans that are not integrated with any income generation activities will soon confront financial challenges.

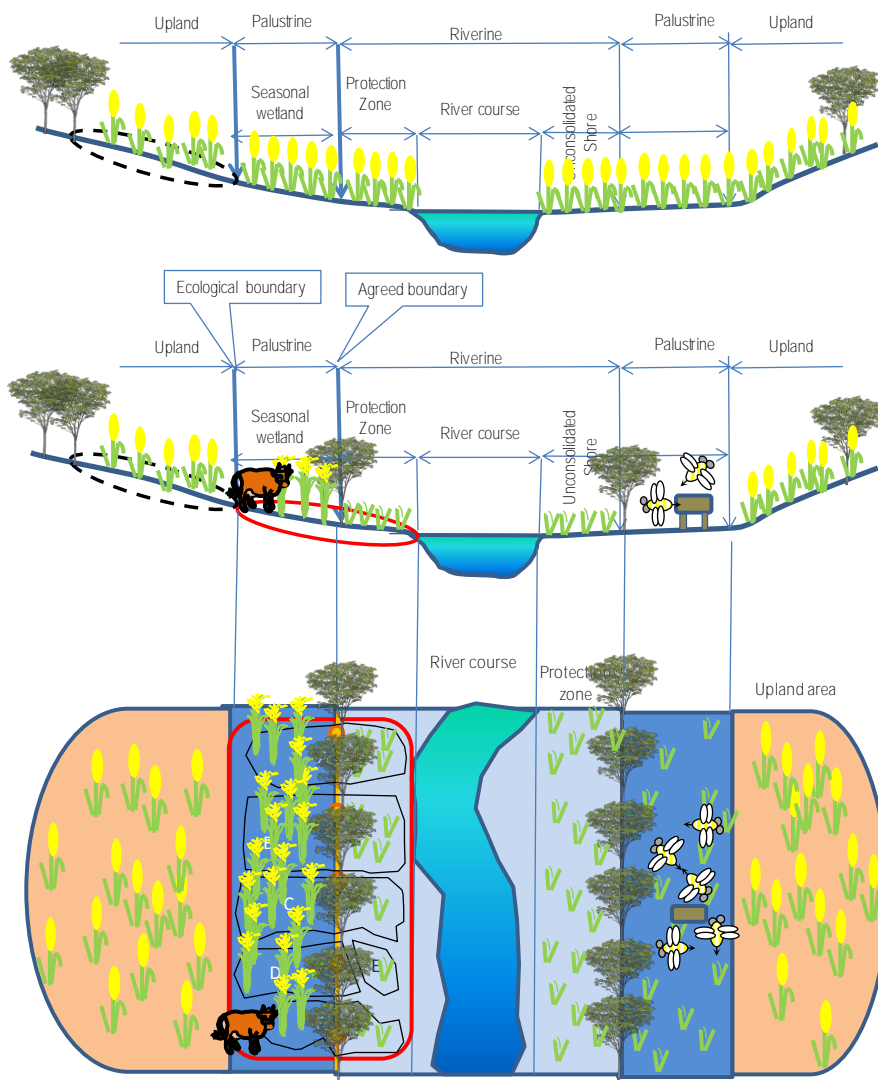


Figure 7 Integration of wetland conservation and wise use into river basin management

There are various IGAs that are compatible with wetland wise use principle. For instance, a community group in Bududa District chose apiary to enhance probability of financial sustainability. The community in Butaleja District chose inland fishery to diversify wetland use in a sustainable manner. The community members were previously users of riparian area that are inherently regulated under the Article 29 of the National Environment (Wetlands, River banks and lakeshore management) Regulations, 2000. The community set aside the area to generate protection zone in the vicinity to the water body.

A conceptual illustration of demarcation and its application to various wetland types are provided in the annex attached to this guideline.

2.2.5 Monitoring and Assessment

Wetland system is an ecological unit wherein changes in upstream land use pattern may have sequential effects on downstream wetland integrity. The ecological monitoring plan should be thus formulated to keep track of changes in ecological character over a wetland system to identify any alterations resulted from the wetland development in general and, thus, to provide earlier warning on wetland degradation before the impacts become unavoidable and irreversible. The ecological monitoring has the following specific objectives: 1) Collect baseline information on the ecological character of the wetland system to provide a benchmark for comparison; 2) Collect information on ecological character of the wetland system to identify, if any, changes in ecological character over the wetland systems with particular focuses on the pilot sites; and 3) Collect information to determine possible causes of water-related problems.

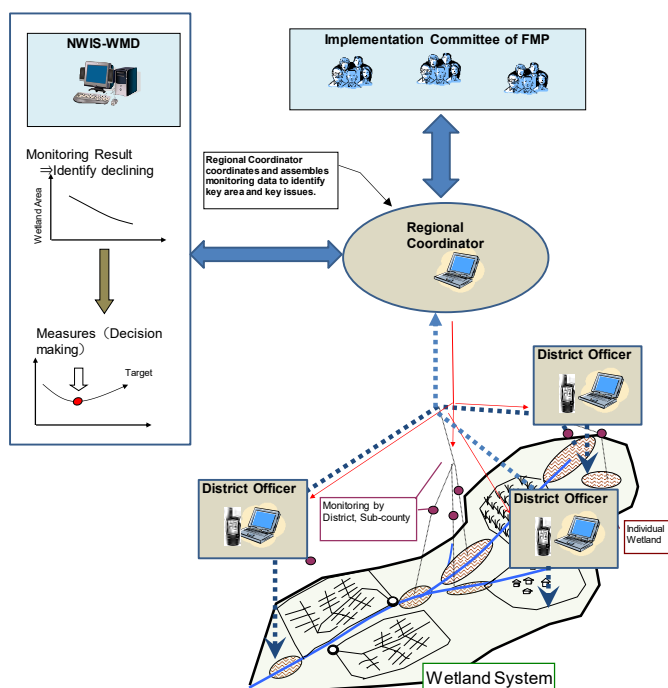


Figure -8 Monitoring and Assessment

The monitoring of the ecological character may be implemented by the wetland department of the ministry and the relevant district governments by forging a network for monitoring and actions. The district officers in charge of wetlands are at the frontline of monitoring and implementation of the pilot activities. They will have more chances of visiting the pilot sites. They will conduct photo point monitoring at selected sites of each pilot project area twice a year for dry and rainy seasons over a period of five years by using the digital cameras that have a built-in GPS.

The regional coordinator will describe and record plant community by using the Relevé data sheet at selected point(s) at each pilot site once a year for a period of five years in collaboration with the district officers. He will also undertake water quality monitoring by using Horiba Multi-parameter water quality checker at selected sampling points over the two wetland systems twice a year for dry and rainy seasons. The regional coordinator will collect and assemble all the monitoring data over the two wetland systems in a designated data entry template and analyse changes of the ecological character to find any issues that require interventions for corrective actions. Upon completion of field analysis, the data will be transferred to the Wetland Department for the entry into the National Wetland Information System. The officer in charge of NWIS will coordinate the regional coordinator to ensure immediate data entry.

Key Lessons in Wetlands Management

3.1 Overview of Key Lessons

In this section of the guideline, key lessons drawn from the experience in implementing the national wetlands management project were extracted, summarised and presented.

3.2 Matrix of Key Lessons

Fifteen (15) key lessons are compiled into a matrix as presented in Table -1.

- 1 Identification and inclusion of all the stakeholders minimize overall cost of wetland management.
- 2 Involvement of CAO in the planning process especially at an early stage is a key for success.
- 3 A planning unit should be designed and determined for a group of people with shared resources and a common interest and vision.
- 4 A protection zone along a water body should be demarcated considering ecological significance and potential positive and negative economic impacts.
- 5 A set of objective criteria should be used for prioritization of community support.
- 6 Gender balance should be considered in the early planning stage.
- 7 Observations by district environmental officers are vital but have to be verified.
- 8 Seamless interaction with relevant Water Management Zone officers is strongly recommended.
- 9 Flexible mobilization of district officers is recommended for timely and prompted planning process.
- 10 Assumed land owners should also be mobilized and used for effective and efficient implementation.
- 11 District forestry officer or National Forest Authority should be consulted in selecting tree species.
- 12 A wide range of participatory planning tools should be used to enhance openness of the community members.
- 13 SWAP and DWAP should be integrated into the relevant development plans to ensure budget allocation.
- 14 District Implementation Committee and Inter-district Implementation Committee should be empowered to enable evaluation and monitoring.
- 15 Sensitization of community should be repeated to ensure agreements are exercised.

Table -1 Key Lessons in Wetland Management Implementation

Key Lessons		Applicability	Description
1	Identification and inclusion of all the stakeholders minimize overall cost of wetland management.	General	One single wetland is often used by various groups of people. They may include crop growers, cattle keepers, water fetchers who are mostly women and children. Exclusion of major group of users in the planning stage may result in delay in overall planning and implementation of wetland management intervention and increase risks by involving potential conflicts of interests that would emerge at a later stage.
		District and Sub county level	District and Sub-county technical officers should identify the key stakeholders that are critical for the planning process on the ground. Every local resident has a stake in wetland management, but due to resource constraints, not everybody in the Sub-county can be consulted. Therefore, only key stakeholders (Parish representatives such as Parish Chief, Chairperson, and Secretary for Environment and resource users) that are presumed relevant and knowledgeable about wetlands at Sub-county level are consulted.
		Community level	There are often opponents in demarcation stage even when the planning process goes on smoothly. In such occasion, it is recommended to skip those areas where strong opposition is expected. But the planners may find a time at a later stage to mobilize them in planning process through various sensitization activity. In consultation with the community, the planners should first build trustworthy with them rather than forcing them in offering land for protection.
		In selecting Wetland Management Committee members	Wetland Management Committee (WMC) members have to be selected from the community by considering gender balance, generation balance, area representativeness and types of wetland users such as fishermen, papyrus harvesters, water collectors and animal grazers. In addition, some influential stakeholders in the community such as large scale land owners should be selected as members since they often decide how to use their lands adjacent to wetlands. Many wetland users just rent the land from owners and do not have decision-making power. It is important that the project respects the power balance and protocol in the community and does not break social relationship.
2	Involvement of CAO in the planning process especially at an early stage is a key for success.	At an early stage in preparing Framework Management Plan	Involvement of CAO in the planning process improve planning efficiency by allowing timely adjustment of schedule of other prospective events at districts/central level and avoid interference with the planning activities. Participation of top managers in the planning process would also improves district's staff productivity and consolidate orientation and commitment. This is especially important when there is need for standardized payment for travel allowance and per diem; and time management of district, sub-county officers are critical in attending relevant meetings by early delivery of information on the planning process.
3	A planning unit should be designed and determined for a group of people with shared resources and a common interest and vision.	General	As discussed in Section 0 in page 3, River Basin Approach is the fundamental approach in planning and implementing wetland management in Uganda. However this physical condition for determining a planning unit should be applied cautiously to minimize a risk arising from limited social cohesion of the group of people participating in planning and management of wetlands. In circumstances wherein inclusion of all the group of people who have limited common interest due to, for instance, the planners may consider to phase the implementation into two stages over a longer period adopting a step by-step process to ensure that implementing entities gradually gain confidence and later embark on a much wider and thorough application.

Key Lessons		Applicability	Description
		In preparing Framework Management Plan	<p>The districts participating in the Framework Management Plan of Doho-Namatala Wetland System are those having a stake in rice production in the Namatala wetlands. The districts in the Framework Management Plan of Awoja Wetland System are those closely relevant to the two Ramsar sites, namely, Bisina and Opeta Lakes.</p> <p>“Lowest Appropriate Level” is a concept often cited in debate on Integrated Watershed Management. It is the level at which significant environmental issues are experienced. If, for example, a specific issue only has a possible impact within a local community, then the community level is the proper management level.</p> <p>On the basis of the concept on Lowest Appropriate Level, planners may consider some area to be excluded from the planning process if its relative impacts on the common resources are limited or negligible. This arrangement would maximize the efficiency and efficacy of the intervention.</p>
		Community level Planning stage	<p>A community may be defined as a group of people with shared resources and a common interest and vision.</p> <p>Once the area to be covered becomes large, two or more interests have to be addressed. For instance, the District officer in Kumi delineated a land area of approximately 97 km² with fishing communities along with the inland upland farming communities. Note that the land area is nearly equivalent to a half of Kampala city. The same was observed in Budaka District to have an inland fishing community and rice growers with a total land area of approximately 34 km². Both of the communities in Kumi and Budaka faced conflict of interests during the implementation stage.</p> <p>On the other hand, in the Bududa district, the area focused has a land area of approximately 20km² in a mountainous region. In addition to a relatively small land area, the planning area was characterized by much smaller focus area for planning on wetland management.</p>
4	A protection zone along a water body should be demarcated considering ecological significance and potential positive and negative economic impacts.	Implementation stage of the community plan	<p>Demarcation in general means the process where the ecological boundary between wetlands and uplands are identified in a linear alignment. It requires local knowledge on water availability over years. However, the Project recommends more demarcation exercise within the wetland to decide the boundary between protection zone and restricted zone. This boundary is determined and agreed by the community based on the reality of wetland use.</p> <p>The communities supported under the project have undertaken wetland demarcation to set aside protection zone generally in accordance with Article 29 of the National Environment (Wetlands, River banks and lakeshore management) Regulations, 2000. Further they have determined ecological boundary where regulated activities are permitted to be performed. The following illustration provides a concept of wetland demarcation exercise supported under the project.</p> <p>Practically the configuration of protection and ecological zones differs among the pilot sites. The officers also collected a wide range of information through the demarcation process: 1) a map(s) of entire project area with GPS coordinate, 2) identification of zones with GPS coordinate and 3) designated/regulated use within each of the zones. They also prepared an inventory of users if there are people who use the land within the agreed boundary for agricultural purpose etc. The inventory included the information on 1) name of the users, 2) contact address and phone number if any, 3) educational background and skills, 4) intention on participation in other project activities, 5) area to be covered by the protection zones, 6) crops grown in one single year (average), 7) average yield of the crops grown and 8) prices of the crops. Upon the completion of the demarcation exercise, the district have drawn-up Memorandum of Understanding (MOU) agreed between each of the districts and the community. The MOU includes articles on 1) a grace period for evacuation agreed with the community, 2) zones accompanied by IDs, 3) an estimated surface area of each zone and 4) regulated or granted activities in each of the zones. The MOUs are currently being finalized at each of the pilot sites. Four districts namely: Kibuku,</p>

Key Lessons		Applicability	Description
			Manafwa, Pallisa and Sironko, have developed Constitutions of community wetland management committees to strengthen their capacity.
5	A set of objective criteria should be used for prioritization of community support.	Planning and pre-investment stage	<p>Financial resources are always in short as against the needs for conservation and management. Support of communities among others requires more resources due to large number of sites requiring budget. Therefore prioritization of communities is an essential process for successful management of wetlands.</p> <p>On the other hand, as emphasized in the Section 0 of page 6, integration of income generation activities is of great importance. However support of communities in implementing IGA is not straightforward.</p> <p>It is apparent that a new IGA has more risks; an IGA requiring a large scale physical investment bears more risks; and an IGA necessitate complex technical intervention entails more risks. At the planning process, it is also advised to undertake a rapid assessment of feasibility and sustainability. This may be done through availability of maintenance service of proposed facility and equipment if any, looking at past experiences in the region or its neighbour. Prior to physical investment, it is recommended to undertake economic appraisal wherever possible.</p> <p>An example of prioritization criteria used in the National Wetlands Management Plan is presented in Table A 1 in page Annex 21.</p>
6	Gender balance should be considered in the early planning stage.	Throughout the planning stage	The use of wetlands may be different by gender. The current use of the wetlands by gender has to be discussed during the workshop. It is recommended to include women, men, girls, boys, and elderly as major users.
7	Observations by district environmental officers are vital but have to be verified.	Throughout the planning stage, but more specifically during the framework management planning stage	<p>District environmental officers have in-depth local knowledge on environmental issues, wetlands and biodiversity. Their knowledge and experiences have to be leveraged in the planning phase to maximize the resource efficiency. However it is also recommended to verify by field observation, scientific measurement/analysis and questionnaire survey wherever the available resources allow doing so.</p> <p>During the Framework Management Planning for Awoja Wetland System, many of the district officers emphasized rapid sedimentation of the Opeta Lake would diminishes lake capacity. A field visit and ocular observation of the entry point of the lake from the upper mountainous streams has indicated that only very fine particles can reach the lake due to sieving effects.</p>
8	Seamless interaction with relevant Water Management Zone officers is strongly recommended.	Throughout the planning and implementation stage	<p>The Ministry of Water and Environment has designated four Water Management Zones over the country: 1) Victoria, 2) Kyoga, 3) Albert and 4) Upper Nile Water Management Zone. Since the wetland management is part of water resource management, seamless interaction with relevant Water Management Zone officers is strongly recommended.</p> <p>During the preparing of the wetland management in Doho-Namatala and Awoja Wetland System, the Wetland Management Department had kept close liaison with the Kyoga Water Management Zone.</p>
9	Flexible mobilization of district officers is recommended for timely and prompted planning process.	In the planning stage	District officers are always multi-tasked. Throughout the planning process, they may face challenges in managing the planning process; while he/she is handling other urgent sector issues. A focal person at the district level should be flexibly selected by considering his/her project portfolio at hand. Delay of one district or one sub-county may require additional cost at a later stage that may arise as a result of additional follow –up activity.
10	Assumed land owners should also be mobilized and used for	At the community level	At the early stage of the planning process, not only wetland users but also land owners adjacent to wetlands have to be identified and involved. Some of them are “assumed” land owners as they believe that they can extend their boundaries into the wetlands and assume their ownership. Without proper

Key Lessons		Applicability	Description
	effective and efficient implementation.		sensitization on the difference between ownership and access to wetlands, more conflicts will occur during the implementation of Community Plans. How to select Wetland Management Committee (WMC) members
11	District forestry officer or National Forest Authority should be consulted in selecting tree species.	At the community level	When trees are planted in wetlands for conservation purpose, appropriate wetland species should be selected with advice from District Forestry Officer or National Forest Authority. Normally, communities prefer commercial species for income generation purpose, but some of the species do not grow well in wetlands. Moreover, there were cases that some seedlings of commercial species like mahogany were uprooted by neighbors after planting and re-planted at their homesteads.
12	A wide range of participatory planning tools should be used to enhance openness of the community members.		Resource mapping is one of the effective methods to visualize the location of wetlands and other important resources. It can be the basis for discussion on issues, problems and opportunities of wetland resources. During the exercise it is important to give participants time to draw the map, let them discuss and agree on the boundaries with neighbouring communities. This exercise can bring the people together and build confidence and trust among them.
13	SWAP and DWAP should be integrated into the relevant development plans to ensure budget allocation.	Upon completion of DWAP and SWAP	To integrate the approved SWAP into Sub-county Development Plan, the Sub-county Wetland Focal Point Person together with Sub-county Chief should ensure that the interventions proposed in the SWAP are integrated into their development plan with clear budgets and funding sources. This does not only promote commitment by the Sub-county leadership, but also gives them an opportunity to mobilize resources to finance such interventions from different available funding sources.
			After DWAP development, the document is presented to the line sectoral committee of the Council and subsequently presented to District Council for approval as a policy working document. Unless these processes are fulfilled, the DWAP is incomplete. After this process, the DWAP should then be endorsed by both the District Chairperson and Chief Administrative Officer (CAO) and a copy submitted to Wetlands Management Department (WMD), Ministry of Water and Environment (MWE) to help in monitoring implementation. It is also recognized that schedule of planning process is also a matter to control the budget of the planning process. It is recommended to schedule of the planning process to have approval by the relevant committee and Council through regular meetings.
14	District Implementation Committee and Inter-district Implementation Committee should be empowered to enable evaluation and monitoring.	Throughout the implementation stage.	District Implementation Committee and Inter-district Implementation Committee are responsible for periodical monitoring and evaluation to measure the progress and achievement of action plans of FMP. The committees identify cross cutting wetland issues and advocate for harmonized inter-district interventions.
15	Sensitization of community should be repeated to ensure agreements are exercised.		It is necessary to sensitize local residents on the difference between protection zone and restricted zone in wetlands. Protection zone should not be used by anyone (no entry area). Restricted zone can be used only for wise use purpose such as tree planting, bee-keeping, fish pond, rice and vegetable production and agroforestry. Other productive activities should be conducted in production zone in upland area.
16			DWAP development aims at analysing, synthesising and summarising the SWAPs by finding the commonalities of wetland uses and problems/issues

Key Lessons		Applicability	Description
			among different sub-counties, and filling any gaps that may have been left out at Sub-county level. While the SWAPs comprise all wetlands in a specific Sub-county, in DWAP development those wetlands are grouped into systems from which they are either tributaries or linked by drainage. This means that the volume of wetlands identified in one SWAP is condensed into one or two systems in DWAP depending on the topographic and hydrological formation.

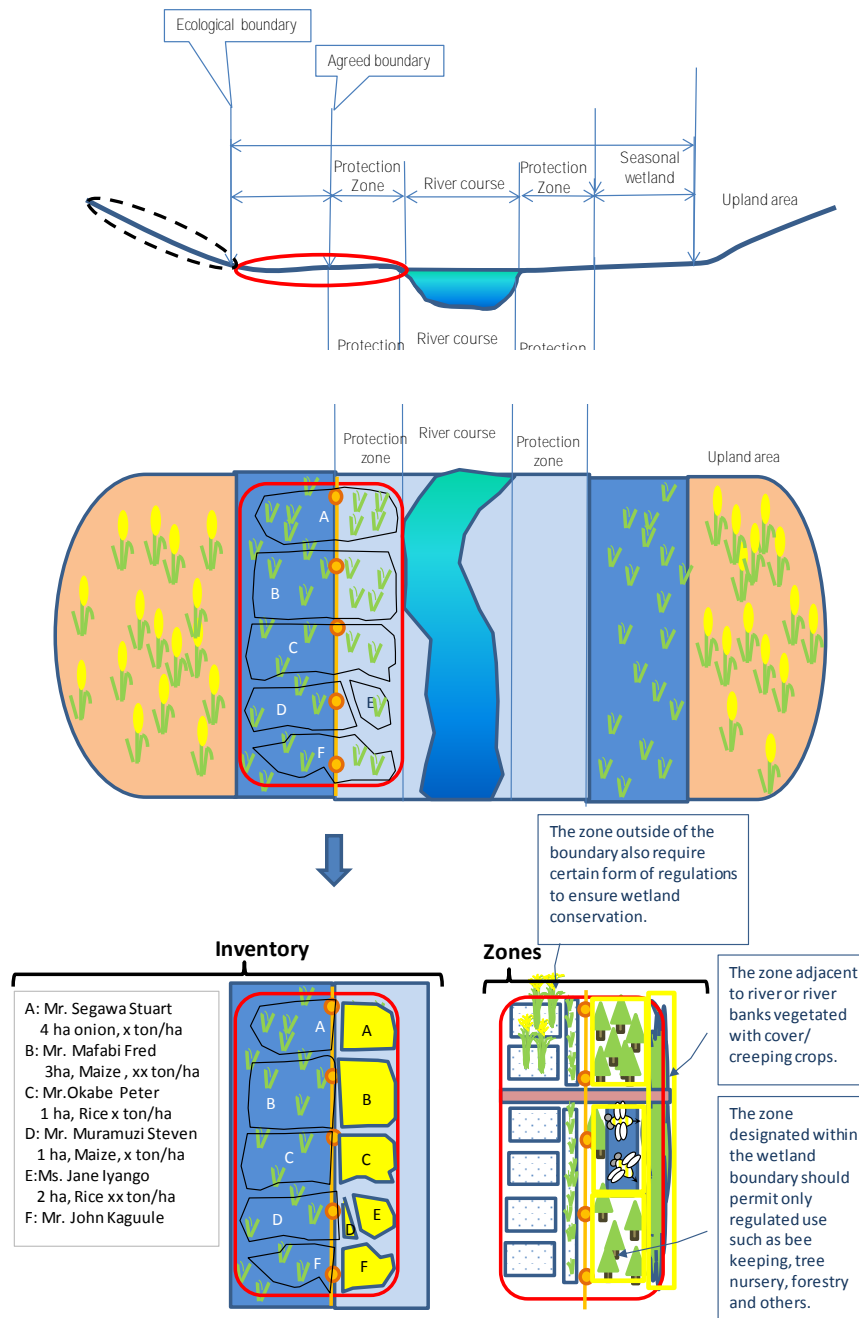


Figure -9 Conceptual Illustration of Wetland Demarcation

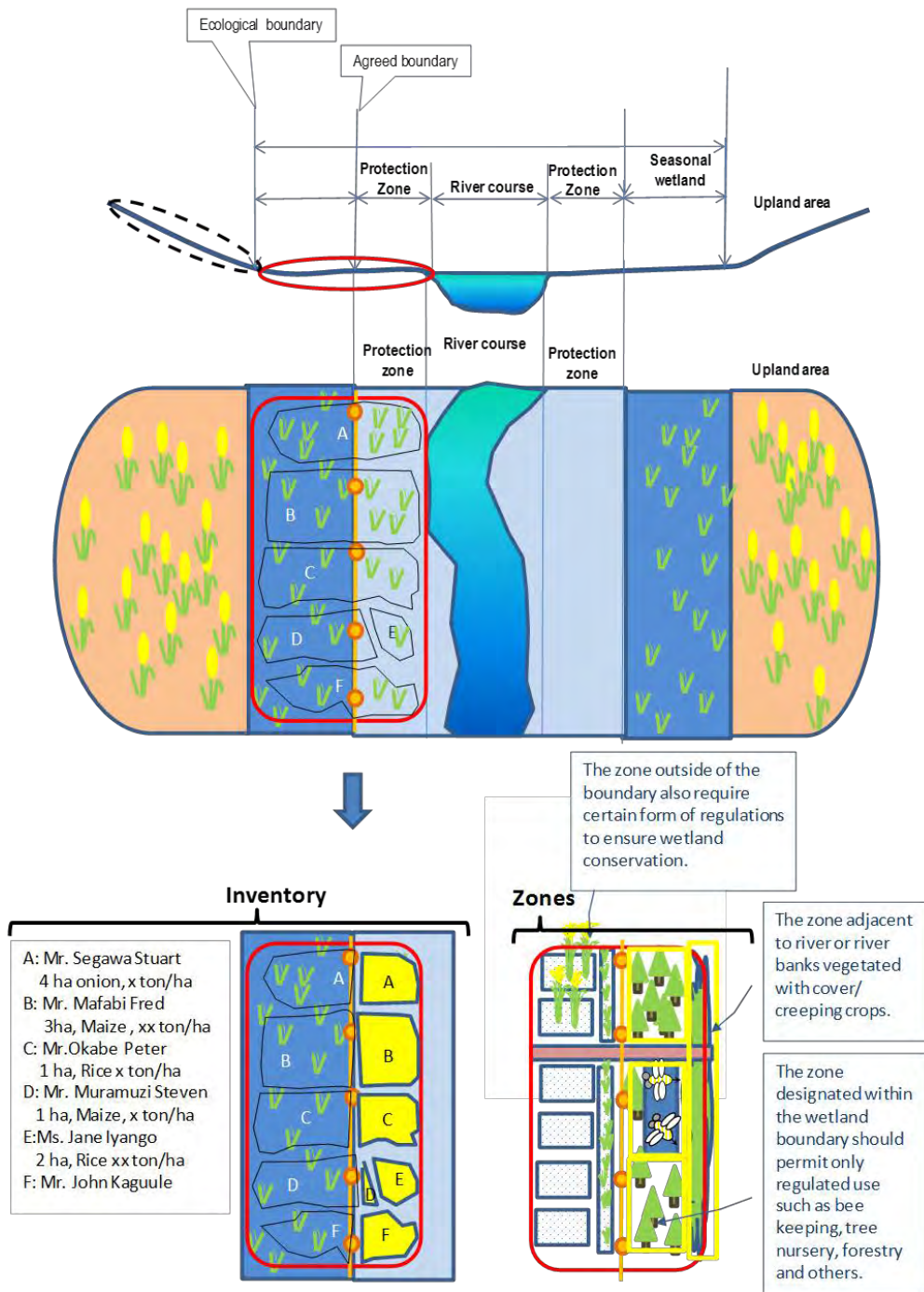


Figure -10 Application of the Concept to Riverine Wetlands 1

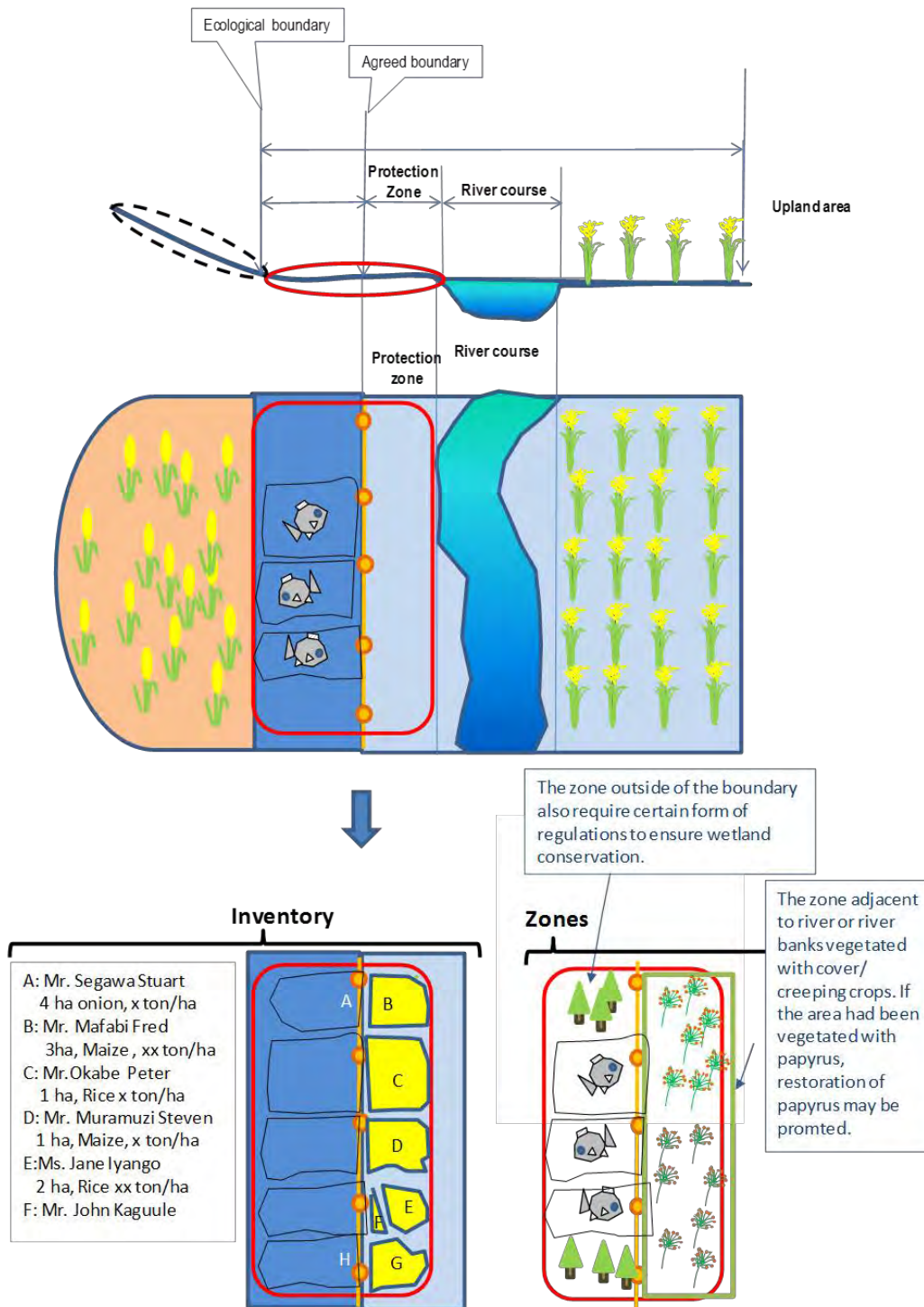


Figure -11 Application of the Concept to Riverine Wetlands 2

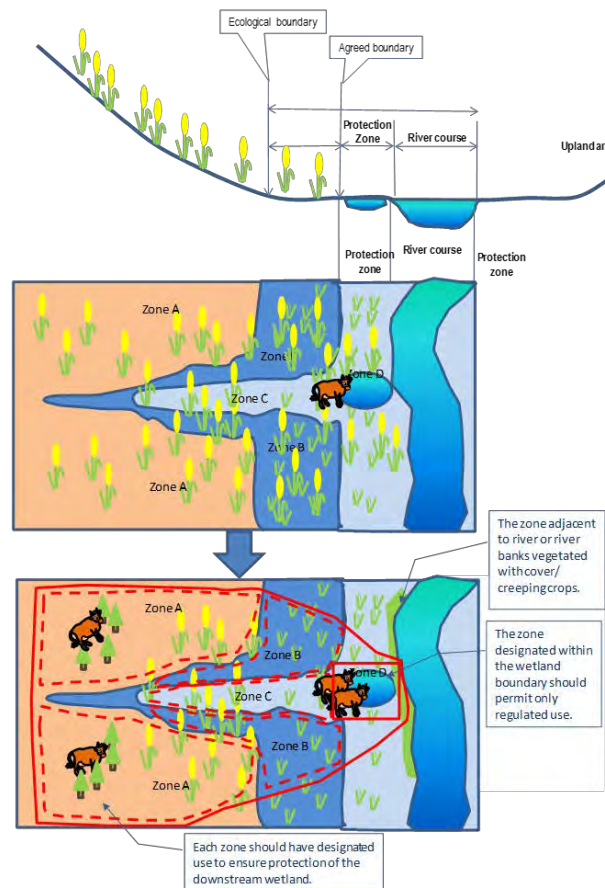
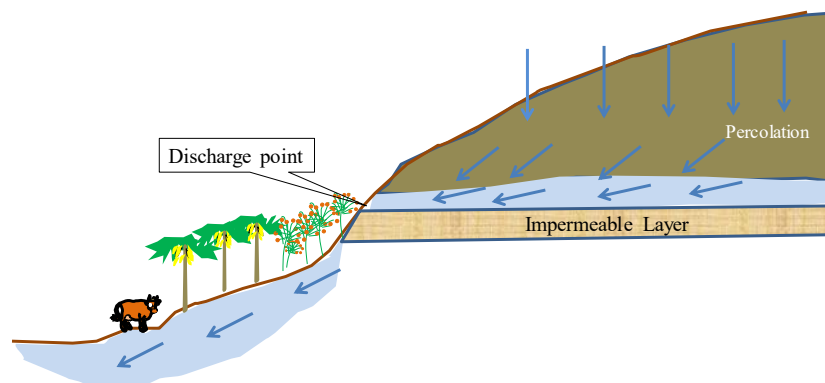


Figure -12 Application of the Concept to Slope Wetlands 1

Note: Slope wetlands²² normally are found where there is a discharge of groundwater to the land surface. They normally occur on sloping land; elevation gradients may range from steep hillsides to slight slopes. Principal water sources are usually groundwater return flow and interflow from surrounding uplands as well as precipitation. Hydrodynamics are dominated by downslope unidirectional water flow. Slope wetlands can occur in nearly flat landscapes if groundwater discharge is a dominant source to the wetland surface. Slope wetlands lose water primarily by saturation subsurface and surface flows and by evapotranspiration. Slope wetlands may develop channels, but the channels serve only to convey water away from the slope wetland.



²² Smith, R. D., Ammann, A., Bartoldus, C., and Brinson, M. M. (1995). "An approach for assessing wetland functions using hydrogeomorphic classification, reference wetlands, and functional indices," Technical Report WRP-DE-9, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

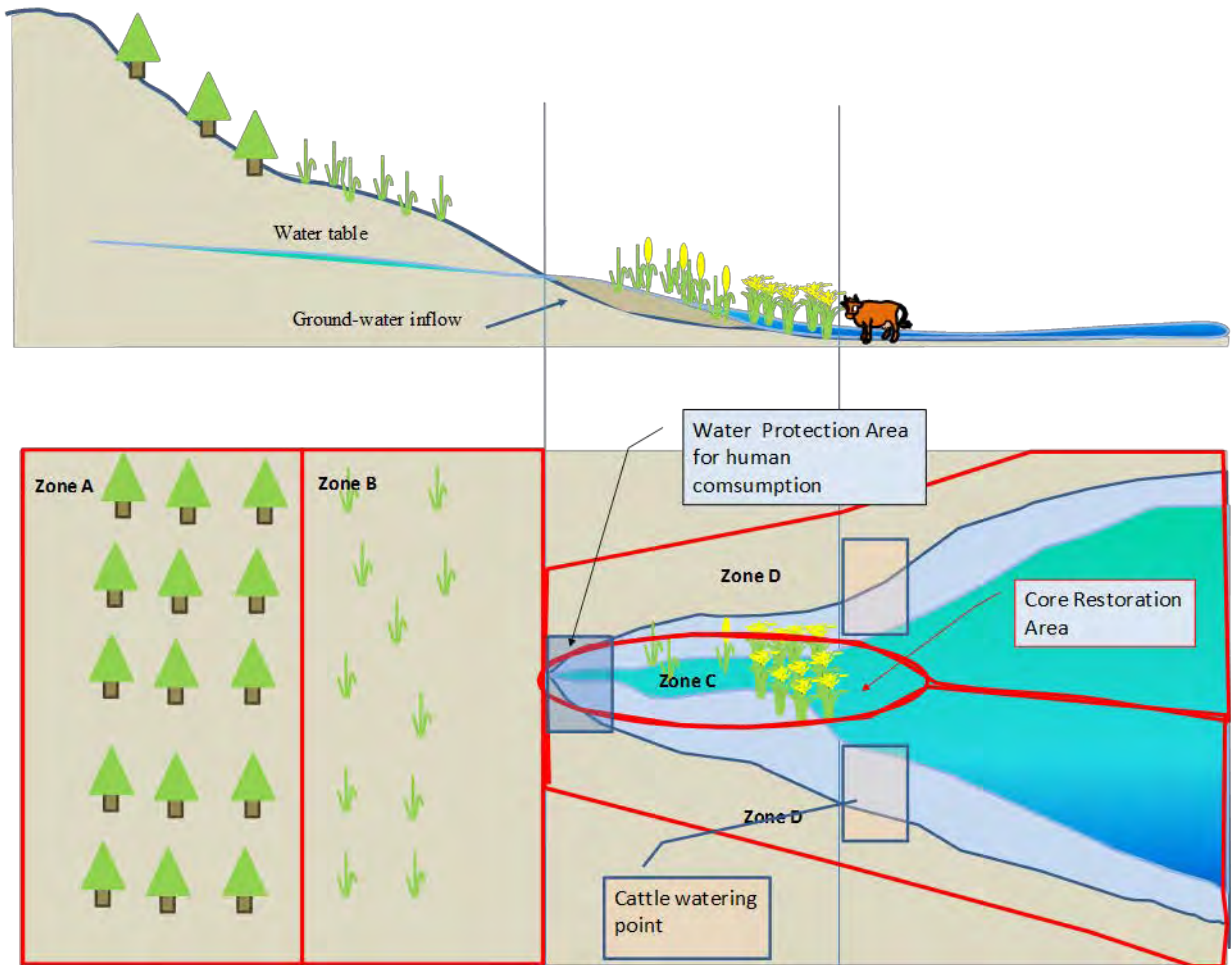


Figure -13 Application of the Concept to Slope Wetlands 2

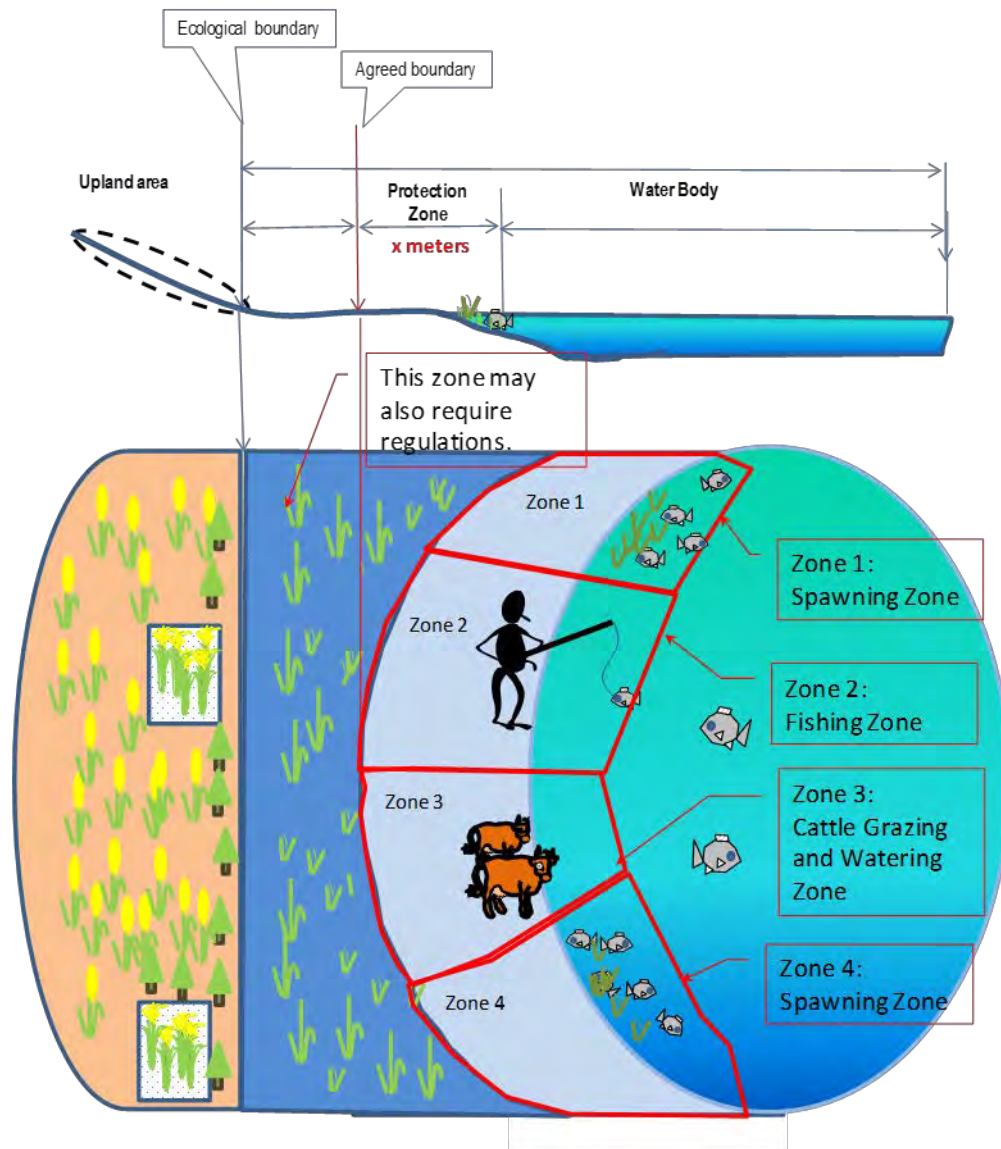


Figure -14 Application of the Concept to Lakes

Table A 1 Evaluation Criteria for Prioritization of Community’s IGAs

Dimensions		Rate	Criteria
Readiness and preparedness of the project participants	Project ownership is an important aspect to be considered. The project participants shall be ready to implement the activities. Presence of relevant entities and their capacity to implement the activities should be evaluated.	1	The beneficiaries haven’t thought of the idea of the project.
		2	The project was proposed by the beneficiaries. The project was subsequently designed and guided by the officers/JICA or other entities.
		3	The beneficiaries have already prepared a consensus on the proposed project/activities.
		4	The beneficiaries have already organized a project entity to implement the project.
		5	The beneficiaries have already initiated the relevant activities by either their own initiative or support from external entities.
Consistency with project design / Wise-Use Concept	The conservation and sustainable use of wetlands and their resources, for the benefit of humankind.	1	The project would aggravate wetland ecosystem integrity or biological diversity.
		2	The project does not have any components that contribute to conservation of the wetlands.
		3	The project is designed to contribute to improvement of livelihood of the wetland users but not to contribute to the conservation and sustainable use of wetlands.
		4	The project is designed to contribute directly to livelihood improvement of the wetland users but indirectly to conservation of wetlands or biodiversity.
		5	The project is designed to contribute both to 1) the conservation and sustainable use of wetlands and their resources and 2) for the benefit of humankind.
Financial / Economic viability	JICA is able to support only small scale project as pilot activity under the project. 100 million shillings is not definite value but should be viewed as a guide. Smaller is better.	1	The initial investment cost goes beyond 100 million shillings at one site.
		2	Either one of the following conditions: 1) The project does not include any mechanisms to ensure sustainability, or 2) the project requires external financial support for long-term operation of the proposed activity.
		3	The project requires external financial support for long-term operation of the proposed activity. But sustainability mechanisms are already in place.
		4	The project is financially feasible and economically viable with a certain level uncertainty.
		5	The project is believed to be promising in term of economic and financial aspects. No uncertainty is so far identified.
Technical feasibility	Venture activity should be avoided. If technical feasibility is not demonstrated, the projects may include small scale feasibility study components.	1	Applicable technology is not available.
		2	There is applicable technology but not demonstrated to be feasible.
		3	There is applicable technology that is demonstrated to be feasible elsewhere in the world. But its efficacy is uncertain in the specific case.
		4	There is applicable technology that is demonstrated to be feasible in the Eastern African Countries. But its efficacy is uncertain in the specific case.
		5	The technology adopted is already demonstrated in the area.
Environmental impacts	The project shall not have significant impacts particularly in the internationally important sites. Introduction of alien species should be carefully avoided.	1	The project has significant environmental impacts that are not avoidable.
		2	The project impact is uncertain.
		3	The project has adverse environmental impacts but they are to be avoided and/or minimized.
		4	No adverse impact is identified.
		5	No adverse impact is identified and the project has positive impacts on the environment.

Some Terminology in Environmental Impact Assessment

Positive impacts - the effect of the given project activity will be to improve the condition and integrity of the environmental resource.

No Impact - there is no impact of the given project activity on the environmental resources. This assessment would be made if the project activity is to be spatially or temporally removed from the environmental resource.

Insignificant - There is an impact of the given project activity on the environmental resource but it is assessed to be too negligible to require intervention in the form of either mitigation or monitoring. This type of impact would occur under at least one of three following conditions: the time scale of the impact is shorter than the life span or time scale of the environmental resource; the area which the impact may occur is smaller than the area over which the environmental resource occurs; or the magnitude of the impact is small relative to the abundance or quality of the environmental source.

Significant and Unavoidable impact - There is an impact of the given project activity on the environmental resource, it is assessed to be sufficiently large that mitigation intervention is desirable, but there are no mitigation measures available or their effectiveness is uncertain. Monitoring would almost certainly be required and monitoring activities would need to be specified and costed. This type of assessment would occur under the following conditions:

* any one of:

- the time scale of the impact is equal to or longer than the life span or time scale of the resource of concern
- the area over which the impact may occur is equal to or larger than the area over which the resource of concern occurs
- the magnitude of the impact is equal to or larger relative to the abundance or quality of the resource of concern
- the resource of concern has international or global significance, (e.g. an endangered species or international waterway)

* and any one of the following:

- there are no known mitigation measures
- it is uncertain whether the significant impact can be effectively mitigated

添付資料 11 LIST OF NATION-WIDE TRAINING PARTICIPANTS

Nation-wide training participants 2013 (Central Region)

No.	Name	District	Position
1	Nsimiire William	Masindi DLG	SEO
2	Kyobutungi R. Winnie	Gomba DLG	SEO
3	Byarugaba Francis	Sembabule DLG	SEO
4	Bbira Yasin	Mityana DLG	SEO
5	Nabbika Mildred	Mpigi DLG	Ag. DEO
6	Vvube Richard	Kalungu DLG	EO
7	Nakiri Jasira	Buikwe DLG	EO
8	Nankya Dorothy	Kyankwanzi DLG	SEO
9	Gateese Teopista	Luweo DLG	SEO
10	Nalunkuma Gladys	Buvuma DLG	NRO
11	Nalumansi Stella	Wakiso DLG	WO
12	Sekagya Moses	Nakaseke DLG	EO
13	Mubiru Farok	Butambala DLG	Ag. DNRO
14	Nampeera Esther	Kiboga DLG	EO
15	Nyangoma Joseline	Hoima DLG	EO
16	Lotet Ronald	Mubende DLG	EO
17	Wakisa Sarah	Nakasongora DLG	EO
18	Byaruhanga Joseph	Kalangala DLG	EO
19	Musaaazi Patrick	Kayunga DLG	SEO
20	Namulema Mary Jude	Lwengo DLG	EO
21	Anne Nakimbugwe	Mukono DLG	EO
22	Ssekamatte John	Lyantonde DLG	DEO
23	Kiyingi Jamil	Rakai DLG	DNRO
24	Katamba Fred	Mukono	For CAO
25	Najib B. Lukooya	Kampala	Manager E.
26	Kinobere James	Nakasongola	SEO

Nation-wide training participants 2013 (Northern Region)

No.	Name	District	Position
1	Olar David C	Agago DLG	DEO
2	Kiyonga Joseph	Kotido DLG	DEO
3	Giyaya Charles	Adjumani DLG	DEO
4	Businge Zalfa	Kiryandongo DLG	DEO
5	Kawawa Serbet	Yumbe DLG	DEO
6	Otike Pabious	Lira DLG	DEO
7	Wany Oyok David	Kitgum DLG	SEO
8	Andiandu Joackim	Arua DLG	DEO
9	Achia Charles	Koboko DLG	DEO
10	Komakech Richard	Lamwo DLG	EO
11	Okola Isaac	Dokolo DLG	Ag. DNRO
12	Apollo Omara	Amolatar DLG	EO
13	Uwor Martin	Zombo DLG	EO
14	Okethwerigu O.R	Nebbi DLG	Ag. EO
15	Philip Kutegeka N	Bulisa DLG	DEO
16	Atto Francisca K	Gulu DLG	DEO
17	Acca Everline	Nwoya DLG	DEO
18	Atalla Joan Angom	Allebtong DLG	DEO
19	Otimoi Jasper	Apac DLG	DEO
20	Opio Moses	Oyam DLG	DFO
21	Ogwal Abraham	Kole DLG	DEO
22	Edema Maurice	Moyo	HNR/SEO
23	Onen George	Amuru	RO
25	Okello Martin	Pader	DEO

List of Nation-wide training participants

Nation-wide training participants 2013 (Western Region)

No.	Name	District	Position
1	Mwesigye Joseph	Isingiro DLG	DEO
2	Musingwire Jeconious	Mbarara DLG	DEO
3	Birungi Clemencia	Buhweju DLG	DEO
4	Kiyingi Jamil	Rakai DLG	DNRO
5	Kasango William	Kamwenge DLG	DNRO
6	Tumwebaze Dinnah	Ntungamo DLG	EO
7	Murungi Ritah	Rubirizi DLG	Ag. DNRO
8	Akakimpa Joab	Mitooma DLG	For DNRO
9	Maate Jockus	Bundibugyo DLG	DNRO
10	Vvube Richard	Kalungu DLG	EO
11	Arinaitwe Patrick	Mbarara DLG	DWO
12	Muja Judith	Kisoro DLG	SEO
13	Nuwagira Tom	Ibanda DLG	DNRO
14	Turyatunga Patrick	Sheema DLG	SEO
15	Mugenyi Cyril	Bushenyi DLG	DNRO
16	Bigabwa Julius	Kyenjojo DLG	SEO
17	Namara Deborah	Kiruhura DLG	DEO
18	Kooli Augustine	Kasese DLG	SEO
19	Ssekamate John Mary	Lyantonde DLG	DEO
20	Agaba George	Kanungu DLG	DEO
21	Ruyonga Godfrey	Kabalore DLG	SEO
22	Ategeka Nicholas	Kyegegwa DLG	DNRO
23	Kamuhanda Herbert	Ntoroko DLG	DEO
24	Byarugaba Francis	Sembabule DLG	SEO
25	Namulema Mary Jude	Lwengo DLG	EO
26	Kawooya Michael	Bukomansibi	DEO
27	Behwera Wilson	Masaka	EO

Nation-wide training participants 2013 (Eastern Region)

No.	Name	District	Position
1	Bakaki Samuel	Kamuli DLG	DEO
2	Achibu Ekwilu JP	Serere DLG	Ag. DEO
3	Najjuma Sarah	Iganga DLG	DEO
4	Kauma Benadet	Bugiri DLG	DEO
5	Kyebogola Juliet	Mayuge DLG	DEO
6	Mweene John Paul	Buyende DLG	DEO
7	Busagwa Alex	Namayingo DLG	DEO
8	Musenero Benard	Luuka DLG	DNRO
9	Ikaaba Dauda	Namutumba DLG	DEO
10	Kawekwa Gideon	Jinja DLG	For DEO
11	Scovia Nakawuma	Kaliro DLG	DEO
12	Erienyu Johnson	Busia DLG	DEO
13	Chemutai Olive	Bukwo DLG	DEO
14	Ariong Deborah	Amudat	DEO
15	Lotyang Joh	Moroto	DEO

List of Nation-wide training participants

Nation-wide training participants 2013 Pilot District

1	Anguti Silas	Tororo DLG	DWO
2	Otim Charles	Amuria	DNRO
3	Wagoli Geoffrey	Sironko	DWO
4	Odeng Emmanuel R	Nakapiripirit	DEO
5	Wakube Charles	Mbale	DEO
6	Were Lamula	Butaleja	DWO
7	Apolot Elizabeth	Katakwi	DEO
8	Madanda H.S	Bulambuli	SEO
9	Kijali K. C	Budaka	EO
10	Bisikwa Sarah	Manafwa	DEO
11	Kaugule Joseph	Kibuku	EO
12	Okalang Emmanuel	Kumi	SEO
13	Awekonimungu Margeret	Ngora	DEO
14	Apolot Francis	Soroti	DEO
15	Galya Muhamad	Palisa	SEO
16	Ojangule Silvesta	Kapchorwa	EO
17	Chemusto Samuel	Kween	DNRO
18	Namono Marrion	Bududa	DEO
19	Lolong Paulina P	Napak	SEO
20	Malinga P.J	Bukedea	SEO

List of Nation-wide training participants

Nation-wide training participants 2014 (Central Region)

No.	Name	District	Position
1	Nsimiire William	Masindi DLG	SEO
2	Kyobutungi R. Winnie	Gomba DLG	SEO
3	Bbira Yasin	Mityana DLG	SEO
4	Nabbika Mildred	Mpigi DLG	DEO
5	Nankya Dorothy	Kyankwanzi DLG	SEO
6	Gateese Teopista	Luweo DLG	SEO
7	Nalunkuma Gladys	Buvuma DLG	NRO
8	Nalumansi Stella	Wakiso DLG	WO
9	Sekagya Moses	Nakaseke DLG	EO
10	Mubiru Farok	Butambala DLG	Ag. DNRO
11	Nampeera Esther	Kiboga DLG	EO
12	Nyangoma Joseline	Hoima DLG	EO
13	Kinene Vincent	Mubende DLG	SEO
14	Kunobere James bond	Nakasongora DLG	EO
15	Byaruhanga Joseph	Kalangala DLG	EO
16	Musaazi Patrick	Kayunga DLG	SEO
17	Anne Nakimbugwe	Mukono DLG	EO
18	Najib B. Lukoooya	Kampala	Manager E.
20	Kashemeire Animate	Kibaale	SEO

Nation-wide training participants 2014 (Northern Region)

No.	Name	District	Position
1	Olar David C	Agago DLG	DNRO
2	Kiyonga Joseph	Kotido DLG	DEO
3	Giyaya Charles	Adjumani DLG	DEO
4	Businge Zalfa	Kiryandongo DLG	DEO
5	Kawawa Serbet	Yumbe DLG	DEO
6	Otike Pabious	Lira DLG	DEO
7	Wany Oyok David	Kitgum DLG	SEO
8	Andiandu Joackim	Arua DLG	DEO
9	Kenyi Desmonds	Koboko DLG	DEO
10	Okola Isaac	Dokolo DLG	DEO
11	Apollo Omara	Amolatar DLG	DEO
12	Uwor Martin	Zombo DLG	EO
13	Okethwengu O.R	Nebbi DLG	WO
14	Philip Kutegeka N	Bulisa DLG	DEO
15	Atto Francisca K	Gulu DLG	DEO
16	Acca Everline	Nwoya DLG	DEO
17	Atalla Joan Angom	Allebtong DLG	DEO
18	Otimoi Jasper	Apac DLG	DEO
19	Opio Moses	Oyam DLG	DFO
20	Ogwal Abraham	Kole DLG	SEO
21	Letaru Leah	Moyo	DEO
22	Onen Pope	Amuru	DNRO
23	Awony Michael	Pader	DEO
24	Avako Nolah	Maracha	DEO
25	Ebong Bonaface	Otuke	DEO

List of Nation-wide training participants

Nation-wide training participants 2014 (Western Region)

No.	Name	District	Position
1	Mwesigye Joseph	Isingiro DLG	DEO
2	Musingwire Jeconious	Mbarara DLG	DEO
3	Birungi Clemencia	Buhweju DLG	DEO
4	Kiyingi Jamil	Rakai DLG	DNRO
5	Kasango William	Kamwenge DLG	DNRO
6	Tumwebaze Dinnah	Ntungamo DLG	EO
7	Murungi Ritah	Rubirizi DLG	Ag. DNRO
8	Akakimpa Joab	Mitooma DLG	For DNRO
9	Maate Jockus	Bundibugyo DLG	DNRO
10	Vvube Richard	Kalungu DLG	EO
11	Arinaitwe Patrick	Mbarara DLG	DWO
12	Muja Judith	Kisoro DLG	SEO
13	Nuwagira Tom	Ibanda DLG	DNRO
14	Turyatunga Patrick	Sheema DLG	SEO
15	Mugenyi Cyril	Bushenyi DLG	DNRO
16	Bigabwa Julius	Kyenjojo DLG	SEO
17	Namara Deborah	Kiruhura DLG	DEO
18	Kooli Augustine	Kasese DLG	SEO
19	Ssekamate John Mary	Lyantonde DLG	DEO
20	Agaba George	Kanungu DLG	DEO
21	Ruyonga Godfrey	Kabalore DLG	SEO
22	Ategeka Nicholas	Kyegegwa DLG	DNRO
23	Kamuhanda Herbert	Ntoroko DLG	DEO
24	Byarugaba Francis	Sembabule DLG	SEO
25	Namulema Mary Jude	Lwengo DLG	EO
26	Kawooya Michael	Bukomansimbi	DEO
27	Behwera Wilson	Masaka	EO

Nation-wide training participants 2014 (Eastern Region)

No.	Name	District	Position
1	Bakaki Samuel	Kamuli DLG	DEO
2	Achibu Ekwilu JP	Serere DLG	Ag. DEO
3	Najjuma Sarah	Iganga DLG	DEO
4	Kauma Benadet	Bugiri DLG	DEO
5	Kyebogola Juliet	Mayuge DLG	DEO
6	Mweene John Paul	Buyende DLG	DEO
7	Busagwa Alex	Namayingo DLG	DEO
8	Musenero Benard	Luuka DLG	DNRO
9	Ikaaba Dauda	Namutumba DLG	DEO
10	Kawekwa Gideon	Jinja DLG	For DEO
11	Diogo Paul	Kaliro DLG	DEO
12	Erienyu Johnson	Busia DLG	DEO
13	Chemutai Olive	Bukwo DLG	DEO
14	Leese Denis	Amudat	For DEO
15	Lotyang Joh	Moroto	DEO

List of Nation-wide training participants

Nation-wide training participants 2014 Pilot District

1	Anguti Silas	Tororo DLG	DWO
2	Otim Charles	Amuria	DNRO
3	Wagoli Geoffrey	Sironko	DWO
4	Odeng Emmanuel R	Nakapiripirit	DEO
5	Nyaribi Rhoda	Mbale MC	MEO
6	Were Lamula	Butaleja	DWO
7	Apolot Elizabeth	Katakwi	DEO
8	Madanda H.S	Bulambuli	SEO
9	Kijali K. C	Budaka	EO
10	Bisikwa Sarah	Manafwa	DEO
11	Kaugule Joseph	Kibuku	EO
12	Okalang Emmanuel	Kumi	SEO
13	Awekonimungu Margeret	Ngora	DEO
14	Apolot Francis	Soroti	DEO
15	Galya Muhamad	Palisa	SEO
16	Ojangule Silvesta	Kapchorwa	EO
17	Chemusto Samuel	Kween	DNRO
18	Namono Marrion	Bududa	DEO
19	Lolong Paulina P	Napak	SEO
20	Malinga P.J	Bukedea	SEO

List of Nation-wide training participants

Nation-wide training participants 2016 (Central Region)

No.	Name	District	Position
1	Olivia Nabukenya	Masindi DLG	Wetland Officer
2	Kyobutungi R. Winnie	Gomba DLG	SEO
3	Byarugaba Francis	Sembabule DLG	SEO
4	Bbira Yasin	Mityana DLG	SEO
5	Kiggundu John	Mpigi DLG	Ag. DEO
6	Vvube Richard	Kalungu DLG	EO
7	Nakiri Jasira	Buikwe DLG	EO
8	Nankya Dorothy	Kyankwanzi DLG	SEO
9	Gateese Teopista	Luweo DLG	SEO
10	Nalunkuma Gladys	Buvuma DLG	NRO
11	Nalumansi Stella	Wakiso DLG	WO
12	Sekagya Moses	Nakaseke DLG	EO
13	Mubiru Farok	Butambala DLG	Ag. DNRO
14	Nampeera Esther	Kiboga DLG	EO
15	Nsita Gertrude	Hoima DLG	EO
16	Lotet Ronald	Mubende DLG	EO
17	Wakisa Sarah	Nakasongora DLG	EO
18	Byaruhanga Joseph	Kalangala DLG	EO
19	Musaazi Patrick	Kayunga DLG	SEO
20	Namulema Mary Jude	Lwengo DLG	EO
21	Masengere Willy	Mukono DLG	EO
22	Ssekamatte John	Lyantonde DLG	DEO
23	Kiyingi Jamil	Rakai DLG	DNRO

Nation-wide training participants 2016 (Northern Region)

No.	Name	District	Position
1	Olar David C	Agago DLG	DEO
2	Kiyonga Joseph	Kotido DLG	DEO
3	Eseru James	Adjumani DLG	DEO
4	Businge Zalfa	Kiryandongo DLG	DEO
5	Kawawa Serbet	Yumbe DLG	DNRO
6	Otike Pabious	Lira DLG	DEO
7	Inziku Collins	Maracha DLG	DEO
8	Wany Oyok David	Kitgum DLG	SEO
9	Andiandu Joackim	Arua DLG	DEO
10	Kenyi Desmonds	Koboko DLG	DEO
11	Nambozo Josephine	Amudat DLG	For DEO
12	Komakech Richard	Lamwo DLG	EO
13	Okola Isaac	Dokolo DLG	Ag. DNRO
14	Apollo Omara	Amolatar DLG	EO
15	Ebong Bonaface	Otuke DLG	EO
16	Uwor Martin	Zombo DLG	EO
17	Okethwerigu O.R	Nebbi DLG	Ag. EO
18	Philip Kutegeka N	Bulisa DLG	DEO
19	Atto Francisca K	Gulu DLG	DEO
20	Acca Everline	Nwoya DLG	DEO
21	Lotyang John	Moroto DLG	DEO
22	Atalla Joan Angom	Allebtong DLG	DEO
23	Otimoi Jasper	Apac DLG	DEO
24	Opio Moses	Oyam DLG	DFO
25	Ogwal Abraham	Kole DLG	DEO
26	Lomongin Emmanuel	Kaabong DLG	DEO

List of Nation-wide training participants

Nation-wide training participants 2016 (Western Region)

No.	Name	District	Position
1	Kamoga Abdu	Isingiro DLG	AEO
2	Byoona Gerald	Kagadi DLG	DEO
3	Birungi Clemencia	Buhweju DLG	DEO
4	Asiimwe Evas	Rubanda DLG	DEO
5	Kasango William	Kamwenge DLG	DNRO
6	Tumwebaze Dinnah	Ntungamo DLG	SEO
7	Monday Lwanga	Rubirizi DLG	DNRO
8	Akakimpa Joab	Mitooma DLG	DNRO
9	Maate Jockus	Bundibugyo DLG	DNRO
10	Baguma Christopher	Kakumiro DLG	DNRO/EO
11	Arinaitwe Patrick	Mbarara DLG	DWO
12	Muja Judith	Kisoro DLG	SEO
13	Nuwagira Tom	Ibanda DLG	DNRO
14	Turyatunga Patrick	Sheema DLG	SEO
15	Mugyenyi Cyril	Bushenyi DLG	DNRO
16	Bigabwa Julius	Kyenjojo DLG	SEO
17	Namara Deborah	Kiruhura DLG	DEO
18	Judith Bwenge	Kasese DLG	WO
19	Tushabe Mulangira	Kabale DLG	DEO
20	Agaba George	Kanungu DLG	DEO
21	Ruyonga Godfrey	Kabalore DLG	SEO
22	Ategeka Nicholas	Kyegegwa DLG	DEO
23	Kamuhanda Herbert	Ntoroko DLG	DEO
24	Animate Kashemire	Kibale DLG	DEO

Nation-wide training participants 2016 (Eastern Region)

No.	Name	District	Position
1	Bakaki Samuel	Kamuli DLG	DEO
2	Opio Sam	Serere DLG	DEO
3	Najjuma Samali	Iganga DLG	DEO
4	Kauma Benadet	Bugiri DLG	DEO
5	Mutalya Ivan	Mayuge DLG	For DEO
6	Mweene John Paul	Buyende DLG	DEO
7	Muganza Emmanuel	Namayingo DLG	DNRO
8	Musenero Benard	Luuka DLG	DNRO
9	Samanya Paul	Namutumba DLG	Physical . Planner
10	Maganda Moses	Jinja DLG	SEO
11	Diogo Paul	Kaliro DLG	For DEO
12	Wanyama Paul	Busia DLG	SEO
13	Chemutai Olive	Bukwo DLG	DEO

List of Nation-wide training participants

Nation-wide training participants Pilot Districts

1	Egeru Paul	Amuria	DFO
2	Nabukwasi Teddy	Sironko	DEO
3	Odeng Emmanuel R	Nakapiripirit	DNRO
4	Wakube Charles	Mbale	DEO
5	Were Lamula	Butaleja	DEO
6	Apolot Elizabeth	Katakwi	DEO
7	Magomu Charles O	Bulambuli	WO
8	Kijali K. C	Budaka	EO
9	Bisikwa Sarah	Manafwa	DEO
10	Kaugule Joseph	Kibuku	EO
11	Okalang Emmanuel	Kumi	SEO
12	Awekonimungu Margeret	Ngora	DEO
13	Adutu George	Soroti	DEO
14	Galya Muhamad	Palisa	SEO
15	Ojangule Silvesta	Kapchorwa	SEO
16	Makwata Moses	Kween	DFO
17	Namono Marrion	Bududa	DEO
18	Lochoro Simon	Napak	EO

添付資料 12 REPORT ON REGIONAL SYMPOSIUM

Report on
Regional Symposium
On
Wetlands Management
BIODIVERSITY AND HUMAN WELFARE IN EASTERN AFRICA
IMPLEMENTATION OF WISE USE PRINCIPLES AND RICE RESOLUTION



Mt Elgon Hotel
4th and 5th October 2016

A collaborative effort between the
Ramsar Centre for Eastern Africa (RAMCEA), Japan International Cooperation
Agency (JICA)

Preamble

This Symposium on wetland management held from 4th and 4th October, 2016 was designed to encourage cross-project knowledge transfer in managing wetlands so that lessons learnt in the National Wetlands Management Project are used by other part of Africa.

The symposium familiarized participants with the principles biodiversity conservation and human welfare in Eastern Africa with special focus on the implementation of the wise use principles and rice resolutions. These principles are regarded as important strategies particularly in food-scarce countries.

The symposium brought together two project initiatives that are being implemented by the Ministry of Water and Environment and Ministry of Agriculture, animal industry and Fisheries. They are the National Wetland Project, and the Project on irrigation scheme Development in Central and Eastern Uganda with support from Japan International Cooperation Agency. The former focuses on two wetland systems in the Eastern region: Doho-Namatala which is known for rice production since 1976, and Awoja Wetland Systems, rich in pristine environment with two Ramsar designated sites: Bisina and Opeta Lakes.

PURPOSE OF THE SYMPOSIUM

The fundamental purpose of the symposium was to encourage cross-project knowledge transfer in managing wetlands so that lessons learnt in the National Wetlands Management Project are used by other part of Africa as well as the best practices in managing wetlands in other countries, instead, will be presented and discussed on its applicability to Eastern Region of Uganda.

Participation

Participants were drawn from a wide range of interest institutions across Eastern Africa representing both public and private sectors. Technical resource persons came from the Ramsar secretariat, Nile Basin Initiative, JICA, Bird Life International, Ministries and Departments.

The Workshop Agenda and List of Participants are contained in Annexes 1 and 2.

Day 1 Proceedings

Opening Ceremony

The first day of the Regional Symposium on wetland commenced with an Opening Ceremony by the Minister of Water and environment.

Also present were the Senior Advisor for Africa- Ramsar convention, Ramcea Regional Coordinator, JICA Representative among others.

The Resident District Commissioner, Kumi who represented the Guest of Honour welcomed the participants to the symposium. He noted that this symposium provides a great opportunity to take stock on the wetland management and Ramcea countries to share experiences. He further emphasized these options/ strategies; resettlement of people in sensitive natural resources, diversifying sources of livelihood to reduce pressure on

ecosystem and institutional support especially local Governments.

Opening Ceremony (L to R): Dr. Paul Ouedraogo, Senior Advisor for Africa-Ramsar Convention, Dr. Motohiro Hasegawa-JICA Representative, Resident District commissioner-Kumi District.

Mr. Paul Mafabi, the Regional Coordinator RAMCEA also noted the roles and strategic objectives of the Ramcea Centre and underscored the fact that sustainable wetland management requires a multi-sectoral, multi-disciplinary approach. He noted that the Centre has registered several achievements that include; adopting strategic framework for Ramcea, carried capacity needs assessment and trained Ramcea site managers among others.

He ended his welcome address by thanking the Government, and partners such as ARCOS, IUCN, BirdLife, JICA, WWF among others for supporting activities geared towards wetland management in the country.

Dr. Motohiro Hasegawa noted that the need to implement the Paddy rice Resolution of the Ramsar Convention and the desire to mainstream agriculture in Environmental management practices. He also stated that JICA would be seeking to mobilize additional technical resources to conduct relevant assessments in the Project areas, in support of environmental and economic development in this country.

Dr. Paul Ouedraogo emphasized the commitment of the Ramsar convention secretariat to assist the contracting parties and this symposium was timely organized to provide indicators for the strategic plan for the convention.

The Chief Administrative Officer, Mbale District Local Government welcomed all participants. He also lauded the involvement of all partners in efforts to improve wetland management across the region. He noted that while the District is very concerned over the safety and contributions from wetlands, this cannot be divorced from conservation of the resource clearly illustrating the need for a multi-sectoral, integrated approach to wetland management

He noted that the symposium on wetland management highlighting the principles of wise use is **"an essential approach that needs to be adopted by our food-stressed country in order to sustain our enviable development.**

He highlighted the need for greater involvement of all stakeholders, both in the planning for and conservation of wetland resources. He noted that civil society participation is essential in grappling with these important wetland management issues.

He applauded the organizers of the symposium, looked forward to ongoing dialogue and collaboration in order to advance the process of improving wetland resources management and promoting the principles of wise use and implementation of the Paddy Resolution of the Ramcea Convention.

Presentations

Presentation: Country Reports

Presenters: Evariste Rufuguta NFP Ramsar- Burundi Convention and Vincent Barugahare-NFP CEPA Uganda.

Mr. Evariste presented the principles of best practices on wetland management

projects in Burundi. He described the details a country's actions and activities toward to sustainable management of its wetland resources. He provided background on the global effort at committing to the sustainable management of wetland resources, noting the ongoing conservation projects that include; 1. Lake Victoria Environment Management Project (« LVEMPII) in the Ramsar site the "North protected aquatic landscape" 2. Biodiversity Protected Area Project in the Ramsar site of « Ruvubu National Park », in the East of Burundi 3. Best on the Dododogo wetland in the West of Burundi, province of Cibitoke.

He also provided insights as to how the ongoing conservation projects fit within existing policy frameworks that guide national development agendas. The 50 metre protection of the buffer zone was of interest to all participants.

Mr. Barugahare presented the Country report for Uganda that highlights efforts to promote best practices that include; developed the communication and awareness strategy, increased awareness of the importance of wetlands and need for tools to conserve them, institutional strengthening, legal framework and community involvement. However, challenges such as inadequate resources and information management and sharing account for slow adoption of the best management practices in the country. He provided the following recommendations; promoting technical innovations, better documentation of successful practices and wetland BMPs education and awareness training.

Discussion.

Participants expressed interest in knowing whether there has been enough sensitization and awareness in the country. It was observed that target awareness and well packaged information is not always done to address specific emerging issues/ drivers. The protection zone of 50 metres in Burundi that significantly differ across the region called for harmonization and sharing of experiences and lessons in implementing the 50 metres buffer zone in the region.

Other issues of concern that have immensely contributed to wetland loss in the region were; greed, land tenure system, institutional mandates, gaps in baseline information, inadequate financial resources and capacity building to effectively handle issues of trans boundary management. It was noted that financial support is very important in developing institutional capacities to develop and implement the wise use principles

Presentation 2: Local Government Report: What skills have the National Wetland Project/ lessons in managing wetlands?

The District Environment officer, Butaleja District Local government on behalf of others officers in the project area, highlighted a number of skills acquired in different fields such as mapping, demarcation, management plans among others. She acknowledged the financial and technical support from JICA. She noted that communities are organized into groups and make contributions to ensure the sustainability of the project activities.

Day 2 Proceedings

The second day of the symposium focused on implementation of the Resolution X.31 for Enhancing biodiversity in rice paddies as wetland systems of the Ramsar Convention. A key note address was given on an experience in Japan

where history and development context are significantly different from those in Uganda. It covered these strategic areas;

a) Demonstrating wise use- the National Wetland Project key outcomes and lessons;

Dr. Yasuhiko Muramatsu gave a presentation on the outputs of the National Wetlands Management Project. He emphasized the River Basin approach adopted in the project; participation of community in planning process to set aside protection zones in line with the relevant regulations; separate demarcation of protection zone and buffer zone; and information management. In his final part of presentation, he discussed and presented eighteen (18) key lessons drawn from the project.

Discussion

The contributions of the National wetlands Project to achieving 3.2% as indicated in the National Development Plan¹¹ remain unclear. This information would be used to solicit for funding from other Development Partners.

b) Biological Diversity in Mexico – COP 13

Dr. Motohiro Hasegawa from JICA provided an overview of the agenda and preparation highlighting strategic objectives and striking the balance between paddy rice growing and conservation of wetlands. The paddy rice resolution aimed at increasing food production without compromising the functions of the wetlands.

Rice fields are included in the Ramsar Classification system and in many parts of the world Rice paddies support important wetland biodiversity. Aquatic biodiversity associated with rice paddies can make an important contribution to the nutrition health and wellbeing to rural communities. However, agricultural practices relating to inappropriate water management and change of natural flow and use of high levels of harmful agricultural chemicals are threats to rice paddies and entire wetland ecosystems.

Some of the recommendations in ensuring sustainable biological diversity as well as promoting paddy rice are detailed in Rio Conventions Pavilion (RCP) as a platform that calls for raising awareness and sharing information about the latest practices and scientific findings linking biodiversity, climate change and sustainable land management.

The full presentation is contained in Annex 4.3.

Discussion

There was concern over the extent and intensity of wetland development and the degree to which surface and ground water supplies are being affected paddy rice cultivation, pollution and contamination. Dr. Hasegawa noted that studies have been done with results indicating minimal negative effects and emphasized that the project design does cover the current existing intact wetland ecosystem.

Studies on how paddy rice cultivation can increase the incomes of the farmers and its impacts on the already existing income sources. It was noted that a detailed biodiversity assessment will be carried highlighting the impacts on the ecosystems and all the major stakeholders need to become involved to ensure the implementation of the ecological monitoring plan.

Closing Remarks.

The JICA representative called upon all participants to ensure sustainable management of all the projects activities after the end of National Wetland

Project. Mr. Paul Mafabi noted that the symposium provided sharing experiences opportunities such as COP13 to showcase the implementation of the wise-use principle as required by Ramsar Convention. He urged participants to take actions now for the recommendations of the symposium such as; Better documentation of information of all the wetland sites; Professionalizing Wetland management; Harmonization of the buffer zones in all the Ramsar sites and Promote eco-tourism that is balance tourism locally and internationally.

He acknowledged the support from different development partners such as JICA, Birdlife and Local Governments.

添付資料 14 MINUTES OF THE JOINT COORDINATION COMMITTEE MEETING

1 st JCC meeting on 30 th May 2012	A	14-2
2 nd JCC Meeting on 31 st January 2013	A	14-8
3 rd JCC Meeting on 6 th November 2013	A	14-12
4 th JCC Meeting on 19 th March 2014	A	14-18
5 th JCC Meeting on 19 th June 2014	A	14-25
6 th JCC Meeting on 19 th November 2014	A	14-33
7 th JCC Meeting on 6 th May 2015.....	A	14-40
8 th JCC Meeting on 21 st July 2015	A	14-49
9 th JCC Meeting on 9 th December 2015	A	14-57
10 th JCC Meeting on 11 th April 2016	A	14-65

MINUTES OF THE FIRST MEETING OF THE JOINT COORDINATION COMMITTEE

**Ministry of Water and Environment
 10:00 AM – 1:00 P.M., May 30, 2012**

AGENDA

1. Adoption of Agenda
2. Introduction of the participants
3. Opening Remarks
4. Presentation on the Project Design
5. Presentation on the Inception Report
6. Open Forum
7. Approval of TOR for the Joint Coordination Committee
8. Closing Remarks and Adjournment of the meeting

Attendance list

Institution	Name	Designation
MWE	1. Paul Mafabi	Commissioner, Wetland Management Department
	2. Lucy Iyango	Assistant Commissioner
	3. Florence E Adongo	Commissioner, Water Quality Management
	4. Lwanga Eva	Senior Hydrologist, Department of Water Resource Management
	5. Imalingat Agnes Nyangan	Analyst/Directorate of Water Resource Management
NEMA	6. Herbert Nabaasa	District Support Officer
MAAIF	7. Muyaka Zakayo	Soil and Water Conservation, Department of Farm Development
MOLG	8. Atim Joel	Senior Inspector
MGLSD	9. Chanty Rufalem	Assistant Commissioner, Family Affairs
MFPED	10. Angella Rwabutomize Matsiko	Senior Economist
JICA Uganda	11. Tetsuo Seki	Chief Representative
	12. Hiroyuki Egashira	Representative
	13. Kyobe Eva N. Kiwanuka	Programme Officer
JICA TAT	14. Yasuhiko Muramatsu	Deputy Team Leader
	15. Hiroyoshi Chujo	Ecosystem Conservation
	16. Koichi Hasegawa	Database/GIS
	17. Keiko Tsuji	Environmental Economist

Highlights/Proceedings of the Meeting:

1. The meeting started at 10:30 a.m., chaired on behalf of the Permanent Secretary by the acting Director, Mr. Paul Mafabi. He welcomed participants to the meeting and apologized for the inconveniences incurred by the change of the venue. He also apologized for the failure of take off of the first meeting. Before proceeding the agenda was reviewed, and approved.
2. After a brief introduction by each of the participants, Mr. Mafabi gave his opening remarks. In his remarks he welcomed the participants on behalf of the Permanent Secretary of the MWE. He emphasized the importance of the project and the need for appropriate timing of the project commencement. He also mentioned that the project contributes to the ministry's mandates and more specifically to the achievement of the Wetlands Sector Strategic Plan 2011 - 2020. He acknowledged that there were still a lot of challenges including 1) capacity gaps at national Local Governments and community levels in which the project is focused, 2) information gap in managing wetlands because it was still a relatively a new area, with limited scientific knowledge and 3) strengthening wetland management system itself in which project supports the effort to manage wetland system and community.
3. Mr. Seki, Chief Representative of JICA Uganda also made remarks. First, he expressed disappointment in the failure to take off of the first JCC meeting convened in the early part of May. He observed that the participation then could not form quorum for substantial discussion. Subsequently, he emphasized the importance of the JCC meeting, and reminded the participants that the meeting would provide the forum to build consensus on the direction and framework of the project. He particularly noted the need for strong inter-agency coordination and collaboration as stated in paragraph²³ in the Record of Discussion for the project. He further emphasized the need for full partnership between the Ugandan Government and JICA in implementing the project, also noting that this was the distinctive nature of the technical cooperation scheme of JICA. It was also pronounced that the MWE should assume the main responsibility; and the success of the project was largely dependent on commitment of the Ugandan side. He also requested the Government of Uganda (GOU) to make an effort garner funds for the project. He further reiterated that inter-agency coordination and collaboration would become imperative in undertaking the project activity recognizing that wetland management requires broad knowledge and expertise that can not be adequately handled by limited number of people in one department and ministry, and further referred to the fact that lack of coordination with other relevant organization in implementing projects frequently results in failure.
4. Having confirmed that no issues were raised at this point, Mr. Mafabi gave a presentation on the project design recalling the brief history of the project formulation that dates back to 2009 initiated in response to a request for a proposal by the Ministry of Finance. He further mentioned that it was followed by initial contact mission on the project, which was followed by a series of consultative meetings and project formulation mission in 2011. The R/D was eventually signed between the Ministry and JICA in the subsequent period.
5. Mr. Muramatsu, deputy JICA Team Leader, made a presentation focusing on the project design, purpose and overall goal of the project. He also expounded the progress and status of the project and presented its general view and orientation. Mr. Muramatsu was requested by Mr. Seki to distribute the

²³ "Both parties agreed that MWE will be responsible for the implementation of the Project in cooperation with JICA, coordinate with other relevant organization and ensure that the self-reliant operation of the project is sustained during and after the implementation period in order to contribute toward social and economic development of Uganda."

PowerPoint presentation.

6. After the presentation, two JCC members, NEMA and MOLG, were also introduced. They took part in the JCC meeting during the presentation, which registered full attendance of all the representatives.
7. After a brief tea break, the meeting was resumed with an open forum and discussion. Ms. Florence of MWE raised a question on how multi-disciplinary participation would be ensured, especially in line with training and assessment. Her question pertained to the specialized training that will be extended to headquarter and district staff. The concern raised is on the issue of consistency on data and approaches to be used in the project execution. In his response, Mr. Muramatsu brought to the attention of the meeting intention of the original framework of the project that focused on the aforementioned category officers. Despite this, he concurred with the proposal, noting that multi-disciplinary participation in training programmes was important. It was further proposed that stakeholders outside the original training plan could also be brought on board through tailored made capacity enhancement programme.
8. Additional input on the training was made as follows: It was generally understood that consideration should be given both to the principle and practicability in undertaking additional training outside the original plan can be handled by reallocating resources within the current budget to cater for multi-disciplinary training. In turn, Mr. Muramatsu emphasized that 1) any specific area of needs for capacity development was not yet identified at this stage and may therefore require further assessment; and 2) the training component should be in line with the original project design. It was finally concluded by Mr. Mafabi that the JICA team would incorporate the training of the multi-disciplinary team in the course of the project as appropriate.
9. Mr. Zakayo of MAAIF discussed the need for appropriate funding in implementing the project by inquiring how to mitigate the issues that may confront in the implementation of the project.
10. Mr. Mafabi proceeded to the second issue of counterpart funding, raised by Mr. Zakayo of MAAIF. He also mentioned that the MWE has made the contribution by providing the office space and registering the vehicles provided by JICA. Mr. Muramatsu explained specific cases wherein budget expenditure is required from the GOU, in which he mentioned 1) travel expenses for the Local Government, on the other hand, 2) equipment for the resource assessment funded by the project. He also mentioned the principle embedded in the Record of Discussion as well as importance of flexibility in managing and implementing the project. Mr. Mafabi subsequently asked to Ms. Angella, MFPED, if counterpart funding is factored into the budgeting process in the coming fiscal year. After deliberation, it was understood that it was impractical to assume it takes place in the coming fiscal year (2012/130 that was starting soon. In this regard, Mr. Mafabi mentioned that the Ministry of Water and Environment would work with the MFPED to obtain additional budget in the fiscal year 2013/2014.
11. Mr. Herbert of NEMA asked if project would incorporate activities pertaining to wetland demarcation, which is becoming pertinent for wetland management. Mr. Muramatsu recognized that demarcation would take place as part of Output 3 and 4 in the community level activities. It was also mentioned that demarcation would have impacts on the project activities. Mr. Mafabi added that zoning would be part of the project activities, and demarcation may be considered in such context. Mr. Muramatsu proposed to take note of the issue at this stage for further consideration. Mr. Mafabi also suggested that the project integrate the demarcation exercise by supporting the delineation process by using GIS in the project area as a starting point. Mr. Mafabi mentioned that we can discuss the demarcation in the medium term.

Mr. Muramatsu responded that the final decision should be made at the time of preparing the management plans.

12. Ms. Florence of WMD suggested that JICA TAT should meet the Water Management Zone Staff in Mbale immediately because a catchment management plan is to be developed, which would ensure complementary linkage between them.
13. Having discussed all the issues in the Inception Report, Mr. Mafabi moved to approve the Inception Report. The motion was seconded by Ms. Chanty of MGLSD and thus the inception report was approved.
14. The meeting proceeded to the discussion on the proposed TOR of JCC. The proposed TOR of the JCC was presented and major issues discussed as follows:
15. The session initially centered on the frequency of the JCC meeting that was proposed as annually. After deliberation, it was agreed that 1) quarterly briefs should be forwarded electrically to all the JCC members to ensure timely updates ahead of the scheduled meetings, sort out emerging issues and also for adequate information sharing and 2) the JCC meeting should be convened twice a year and will deliberate on biannual progress reports. It was also agreed that the timing of the meeting would accommodate the needs of project progress and assignment schedule. Based on the deliberation, the proposed TOR was revised to reflect this. At this point, Mr. Seki of JICA Uganda confirmed that the quarterly briefs were important, and also emphasized the need for WMD counterpart staff to jointly prepare progress reports with the JICA TAT.
16. Deliberations were also made on the composition of the JCC, with a proposal to include the Ministry of Lands, Housing and Urban Development as a permanent member. However member suggested that a provision be made to co-opt new members based on the technical need at hand. In addition it was proposed and agreement reached that each JCC member has an Alternate, for continuity. A request to this effect will be made to respective institutions. After the deliberation, Mr. Mafabi asked if the TOR of JCC as amended could be approved. Mr. Herbert of NEMA moved the adoption of the TOR as amended. Mr. Atim of MOLG seconded the motion. (The amended TOR for the JCC is attached to the minutes.)
17. Having confirmed that all the issues were deliberated, Mr. Mafabi proposed to proceed to The last agenda item.
18. Mr. Seki of JICA Uganda in his closing remarks requested that the JCC build consensus on the direction and framework of the project;. He also noted the current budgetary needs for the [project, observing that Government of Uganda needed to incorporate this in the budget for the next financial year. In the meantime JICA would backstop as is feasible.
19. Mr. Mafabi on his part expressed gratitude to Mr. Seki for his participation and once again apologised for the failure of the previous meeting. He called on the need for information sharing with all partners in the project execution, and then adjourned the meeting at around 1:00 PM.

Terms of Reference for the Joint Coordination Committee
National Wetlands Management Project

1. A Joint Coordination Committee (hereinafter referred to as JCC) is hereby established as a body of major stakeholders at the national level to ensure effective and efficient implementation of the captioned project.
2. The functions of the JCC shall include, *inter alia*:
 1. approving the annual work plan of the project;
 2. reviewing quarterly briefs and bi-annual progress reports;
 3. exchanging opinions on major issues that arise during the implementation of the Project;
 4. taking necessary actions that are required for smooth implementation of the project;
 5. facilitating the avoidance and settlement of disputes; and
 6. promoting inter-institutional co-ordination of project related activities.
3. The JCC shall be composed of representatives of the following Ugandan and Japanese parties and headed by the Permanent Secretary of the Ministry of Water and Environment (MWE), or their designees, as the Project Director who will be responsible for the overall administration and implementation of the Project.

Ugandan Side

1. Wetland Management Department
2. Directorate of Water Resource Management
3. Directorate of Environmental Affairs
4. National Environment Management Authority
5. Ministry of Agriculture, Animal Industry and Fisheries
6. Ministry of Finance, Planning and Economic Development
7. Ministry of Tourism, Wildlife and Heritage
8. Ministry of Local Government
9. Ministry of Gender, Labour and Social Development

Japanese Side

1. Japanese Experts
 2. JICA Uganda Office
 3. Others concerned as appointed by JICA
4. Other Ministries, directorates, organizations and experts may be invited as needed depending on the issues deliberated to assist the JCC in executing its mandates and functions.
 5. The following general procedures are proposed and may be adjusted by the JCC when deemed necessary:
 1. The meetings of JCC shall be held twice a year or whenever deemed necessary;
 2. The timing of the meeting would accommodate the needs of project progress and assignment;
 3. Quarterly reports will be sent to electronically to the JCC members;
 4. The decisions of the Committee shall be taken by consensus;
 5. The Joint Committee may establish and delegate responsibilities to ad hoc and standing committees or working groups, and seek the advice of nongovernmental persons or groups;
 6. The Secretariat of JCC will be with the head of the Wetlands Management Department;

7. Facilitation for JCC activities will be provided in accordance with GoU and donor agreed rates; and
8. Each Party shall designate an office to serve as the contact point with regard to this Agreement. That office shall receive official correspondence related to the activities of the JCC.
9. Each party shall designate an alternate to ensure continuity of the JCC.

MINUTES OF THE 2nd JOINT COORDINATION COMMITTEE MEETING (JCC) HELD ON THE 31ST JANUARY 2013 11:00AM IN THE CONFERENCE ROOM OF THE MINISTRY OF WATER AND ENVIRONMENT.

MEMBERS PRESENT

- | | |
|---------------------------------|--|
| 1. Mrs. Paul Mafabi | Commissioner Wetlands (Chairman) |
| 2. Ms. Lucy Iyango | Assistant Commissioner Wetlands |
| 3. Mr. Hiroyuki Egashira | JICA Uganda Office |
| 4. Mr. Yasuhiko Muramatsu | JICA TAT |
| 5. Mrs. Eva Kyobe | Administrator JICA Uganda Office |
| 6. Mr. Nabasa Herbert | District Support officer |
| 7. Mr. Muyaka Zakayo | Soil & Water Conservation, Dept. of Farm Dev'pt |
| 8. Ms Charity Bekunda Rutaremwa | Assistant Commissioner, Family Affairs |
| 9. Angella Rwabutomize Matsiko | Senior Economist (MFPED) |
| 10. Lwanga Eva
Management | Senior Hydrologist, Department of Water Resource |
| 11. Mrs. Muhenda Jane M | Secretary JICA /CTII Project |

ABSENT WITH APOLOGY

- | | |
|---------------------|---------------------------|
| 1. Mr. Obong David | Permanent Secretary (MWE) |
| 2. Mr. Esim Okuraja | Undersecretary (MWE) |
| 3. Mr. Atim Joel | Senior Inspector (MOLG) |

AGENDA

1. Opening prayer
2. Introduction of the participants
3. Opening Remarks
 - a. Chairman
 - b. JICA Representative
4. Minutes of the previous meeting and follow up actions
5. Overview and Presentation of the progress report
6. Open Forum
7. Closing Remarks and Adjournment of the meeting

No	Key Issues	Action
	MIN 1/2013/JCC2 OPENING PRAYER	
	The meeting started at 11:00 am with an opening prayer led by Mrs.Jane Muhenda who invoked God's guidance for fruitful deliberations and to grant wisdom to all stakeholders for implementing the project.	
	MIN 2/2013/JCC2 SELF INTRODUCTION	
	All the members around made self introduction with an aim of knowing each other.	
	MIN 3/2013/JCC2 OPEN REMARKS	

A	<p>The chairman who is the Director of the Environment Affairs in the Ministry of Water and Environment (MWE) represented the Permanent Secretary MWE. He welcomed members and informed them that the Permanent Secretary was unable to attend because he was on leave and the Undersecretary was occupied with other ministry assignments but assured the participants that the absent officers were fully represented by him. The chairman called for well reflected budgetary provisions concerning the wetland project implementation by the Ministry of Finance. The budgetary allocations must be clearly shown if the project is to be properly implemented.</p>	
B	<p>Recalling the opening remark delivered by the former chief representative, the representative of JICA in his remark emphasized that inter-agency coordination and collaboration would become imperative in undertaking the project activity. He subsequently noted the issue of counterpart funding with particular reference to the maintenance cost of software for NWIS recognizing it as fundamental and essential element for sustainability of the project.</p>	
	<p>Participant's reactions on the two communications</p> <p>Training of central government staff Training of central government staff was initially raised to ensure that relevant organizations are able to fulfil each responsibility in the project. Members observed that there is need for institutional interagency collaboration in implementing the project which will involve all institutions concerned such as Ministry of Agriculture Animal Industry and Fisheries (MAAIF), Ministry of Gender Labour and Social Development, Ministry of Local Government, National Environment Management Authority etc. A lesson drawn from other projects was introduced, in which it was assumed that the project activity would be integrated into government programs or partners are able to get counterpart funding for continuation of the activities. It was recommended that the project should have a mechanism or plan to ensure sustainability.</p> <p>Involvement of local Governments Participants expressed the need to involve local Governments and local leaders to enhance project support and ownership. Members emphasised that the planning strategy for the project implementation should seriously seek support from Local Government appreciated members concerns and promised to review the implementation plan.</p> <p>World Bank Rice Irrigation Project The JICA representative raised a concern on a planned project by the World Bank for rice production to assist 10 districts in the Eastern region, which might affect the pilot activities under the wetland project; though the information is unconfirmed. If so he requested that information should be shared between Ministry of Agriculture and Wetland Management. Participants called for proper wetland Management procedures in place whether the World Bank brings in money or not.</p> <p>Counterpart funding; The chairman referred that budget has remained same but in real term it was reduced. Only way to handle the matter is to be funded by the government under the development budget. We may not have specific line for counterpart funding for the project. But the Ministry will factor in some of those activities, especially, NWIS, to have some fund for the next fiscal year. He further requested that JICA and MFPEF push from their side for budgeting, particularly from the higher level. Also we have through discussion with Local government financing commission to increase conditional grant to bring it to the level of 1 billion. The district will receive little bit more money. Of course, it will split among</p>	<p>Mr. Muyaka will follow the WB project.</p> <p>MFPEF/JICA</p>

	<p>the districts. We would use the criteria to support the district under the project. The management plans will be the criteria.</p> <p>Resolution on Counterpart funding; JICA to discuss with Ministry of Finance at higher level for funds allocations, the way it was done when they planned to provide NWIS programme to help link with the Districts. The Assistant Commissioner suggested that additional five staff be trained to build capacity in the project implementation process. The chairman also informed members that there will be transfer of staff and he hoped these transfers will not interfere with project implementation process.</p>	Uganda Office will discuss it.
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MIN 4/2013/JCC2 MINUTES OF THE PREVIOUS MEETING AND FOLLOW UP ACTIONS.

N O	Key Reactions	Action
	<p>The previous minutes were read and approved with some amendments.</p> <p>Reactions to the previous minutes; In the amendments members suggested that the institutions' names be written in full with abbreviations at the end. At this point, JICA representative suggested for changing the venue in the subsequent meetings to allow members participate at designated time. He also requested members to always observe time for such meetings. The Assistant Commissioner expected a report on a multidisciplinary implementation team. Clarification was also made that Ms Florence is from the Water Quality Management (WQM).</p> <p>Counterpart funding ; On clarification of counterpart funding, a representative from Ministry of Finance promised to make a follow-up with officers concerned with a budget to establish whether counterpart funding was provided for in the next financial year and she wished to know whether it was part of the agreement between JICA and the Government of Uganda.</p> <p>Resolutions;</p> <ul style="list-style-type: none"> • Ministry of Finance and JICA Uganda reviews the agreements to ensure there is counterpart funding within the next two weeks since this is the planning and budgeting. • The action progress report should be on a separate page. • The minutes should have a provision for signing by the chairman and the secretary. • After correction of the minutes, the printout for the chairman and secretary to sign should be done. 	<p>Mr. Muramatsu will consider it as an option.</p> <p>All participants will observe time from the next meeting.</p> <p>MFPED/JICA Secretary</p>

MIN 5/2013/JCC2 OVERVIEW AND PRESENTATION OF THE PROGRSS REPORT

No	Key Issues and Comments	Action
A	<p>Mr. Muramatsu Yusuhiko the Project Deputy Team Leader presented the progress report where he initially reviewed the project design; major events since the first JCC in May. In his presentation, he specifically emphasized the need of continued budgetary allocation by the government for sustainable use of NWIS.</p>	

MIN 6/2013/JCC2 OPEN FORUM

No	Issues /Comments discussed	Action
A	<p>The plenary observed that there is need for participation of focal ministries staff and the staff should be trained for sustainability. Members of the plenary observed that there is need to intensify</p>	

	<p>mobilisation of focal point persons and should also participate in the training.</p> <p>Members inquired from the chairman whether restructuring of the staff will not affect the project implementation process. The chairman clarified that restructuring will only affect the office of the commissioner and that the trained staff will ensure the project sustainability.</p> <p>There was a concern on how the project implementation will proceed especially where the wetland users were not cooperative. Members observed the need for coordination between concerned focal ministries during the training to ensure joint ministerial ownership.</p> <p>The chairman however informed members that it may not be possible to train everybody in the ministry but what can be done is the orientation of the stakeholders including NEMA.</p> <p>The project deputy team leader suggested that involving other ministries should be done in due course as the project is being implemented and be brought on board as and when necessary.</p>	
A	<p>Resolution;</p> <p>The members resolved that the Namatala wetland has been used for a long time and people see it as the only source of livelihood that is why there is need to involve District participation early enough. The project deputy team leader will make arrangement to involve the LC chairpersons for local project ownership at an appropriate timing.</p> <p>District community development officers involvement</p> <p>Since the project involves community's support and participation there is need to involve community Development officers in the training and mobilisation of the local people for easy project acceptance.</p> <p>On this note the Project deputy team leader frankly stated that involving community development officer has not been automatic but some districts such as Ngora has been involved. He promised that community development officers will be selected and be brought on board according to the project level implementation more especially at the second stage.</p> <p>Members re-echoed their concern for the district lack of internet services prompting wetland officers to use their personal modems or internet cafes. In response the project deputy team leader found it necessary to provide internet services to the districts wetland officers but this requires a review of terms of contract.</p> <p>JICA was requested by members to set up initial project internet funding as part of the counterpart funding project.</p>	<p>Project Deputy team leader</p> <p>Project Deputy team leader</p> <p>Project Deputy team leader</p>

MIN 7/2013/JCC1

CLOSING REMARKS

In his concluding remarks the chairman reiterated that the issue of counterpart funding be quickly addressed, institutional collaboration be improved and more commitment is needed by the staff to participate in the project implementation and activities.

He concluded by wishing the participants a safe journey back home at 01:00pm

MINUTES OF THE 3rd JOINT COORDINATION COMMITTEE MEETING (JCC) ON NATIONAL WETLANDS MANAGEMENT PROJECT HELD ON THE 6TH NOVEMBER 2013 10:00AM IN THE CONFERENCE ROOM AT FAIR WAY HOTEL.

MEMBERS PRESENT

1. Mr. Paul Mafabi	DEA-MWE (Chairman)
2. Ms. Lucy Iyango	AC/AIM
3. Mr. Yasuhiko Muramatsu	JICA TAT
4. Mrs. Eva Kyobe	Programme officer (JICA)
5. Mr. Nabasa Herbert	District Support officer (NEMA)
6. Mr. Muyaka Zakayo (MAAIF)	Soil & Water Conservation, Dept. of Farm Dev'pt
7. Ms Charity Bekunda Rutaremwa	Assistant Commissioner, Family Affairs(MGLSD)
8. Mrs. Muhenda Jane M	Secretary JICA /CTII Project
9. Ms. Norah Namakambo	Principal Wetland Officer (WMD)
10. Mr. Afai Silvano	Regional Wetland Coordinator –Northern (WMD)
11. Mr. Gokaka Geofrey	Wetland officer (WMD)
12. Ms. Carol K. Kairumba	Senior Wetland Officer (WMD)
13. Mr. Kabaalu Deo K.	Regional Wetland Coordinator – Eastern (WMD)
14. Mr. Hirofumi Hoshi	Chief Representative (JICA)
15. Mr. Kizito Simon	SI/DI (MoLG)
16. Ms. Namakula Regina C	WMD/MWE
17. Mr. Kyambadde Richard	Senior Wetland Officer – RD (WMD)

ABSENT WITH APOLOGY

1. Mr. David O. Obong	Permanent Secretary (MWE)
2. Mr. Esim Okuraja	Undersecretary (MWE)
3. Mr. Atim Joel	Senior Inspector (MOLG)
4. Angella Rwabutomize Matsiko	Senior Economist (MFPED)
5. Lwanga Eva Management	Senior Hydrologist, Department of Water Resource

AGENDA

1. Opening prayer
2. Introduction of the participants
3. Opening Remarks
 - a. Chairman
 - b. JICA Representative
4. Minutes of the previous meeting and follow up actions
5. Overview and Presentation of the progress report
6. Open Forum
7. Closing Remarks and Adjournment of the meeting

	MIN 1/2013/JCC 3 OPENING PRAYER
No	Key Issues
	Meeting was called to order at 10:00 am by the Chair Mr. Paul Mafabi. He invited Ms. Norah Namakambo to lead us in an opening prayer and thereafter all the members around made self introduction with an aim of knowing each other.
	MIN 3/2013/JCC3 COMMUNICATION FROM THE CHAIR

A	<p>In his opening remarks the chairperson welcomed all the members for their turning up for the meeting despite their busy schedules and appreciated the support from the Government of Japan through JICA and the involvement of Local Governments in project implementation.</p> <p>He sent his apology for failure to conduct the meeting last week due to circumstances beyond his control.</p> <p>The chairperson called for evaluation of the first phase of the project implementation especially handling issues that influenced its implementation. He asked members to mention the challenges and achievements realised so far in the course of project implementation.</p> <p>He said the meeting was also aiming at enhancing capacity of Local Governments and other stakeholders in Environment protection</p> <p>He reiterated that local governments as project implementers needed to take the next implementation stage very serious but with technical support for the ministry of water and environment.</p> <p>The chairperson emphasized the need to look at the collected information and how it could be used in the project implementation.</p> <p>Another issue to look at was the project's Ownership by the community. Members in the meeting wanted to know whether there is full involvement of communities where the project is managed and they also wanted to know whether the tool for information collection had been established.</p> <p>The chairperson inquired whether the baseline information survey concerning ecological as well as impact assessment of the project and its effects on socio economic wellbeing of the communities had been put into consideration especially in Namatala.</p> <p>Members were also concerned about the provisions of the legal framework by other stakeholders such as NEMA, NFA etc. That has direct impact in the project implementation processes.</p> <p>The chairman looked forward to other stakeholders to guide in project implementation especially on policy matters, and concluded by thanking the members for their action and wished them fruitful deliberations.</p>
B	<p>JICA REPRESENTATIVE PRESENTATION:</p> <p>The JICA representative expressed great pleasure and privilege for having participated in this joint coordination committee meeting that constituted a project milestone of the National Wetland management project. He thanked members for their participation amidst their busy schedules.</p> <p>He also thanked the Ministry officials especially the Permanent Secretary and the Director of Environmental Affairs in the Ministry of Water and Environment for their continued commitment in the implementation of the project in its first phase. He said that without their support it could not have been easy to implement the first phase of the project.</p> <p>The JICA representative expressed his gratitude for the successful results accomplished in the 1st phase of the project.</p> <p>He informed members that it was the last JCC meeting of the first phase of the project implementation. He further informed them that it was a very important milestone where we needed to review the project plan and identify any problem in the project schedule before proceeding to the second phase.</p> <p>Members were informed that the task completion report from the wetland Management Department showed that major tasks were successfully carried out during the 1st phase of the project.</p> <p>He was delighted to know that the National wetlands Information system {NWIS} is now operational and accessible through internet. He was impressed by the department which considered the aspect of the project sustainability in redesigning the NWIS.</p> <p>The JCC representative was pleased to know that seven out of the eight sub- projects</p>

on the assessment were completed as was proposed by the department in the second JCC meeting convened in January 2013.

He was informed that the remaining sub-project and the policy review is a continuous process to be pursued in the subsequent phase of the project through implementation of pilot activities.

The JICA representative was informed that the Framework Management Plans for the two wetland systems were completed and the launching ceremony was scheduled to take place in the mid of November 2013.

He appreciated the efforts and the committeemen exhibited by officers of the Wetland Department as well as the relevant district officials in assembling the visions and objectives among the diverse stakeholders in preparing the framework management plans.

He was also grateful to know that Wetland Department had completed the training on the wetland information system for all the district officials nationwide.

He was hopeful that the district offices all over the country are now able to access the information of NWIS.

Mr. Hoshi recognised that there were several issues that had not yet been addressed in the project implementation processes. However he was satisfied with the accomplishments of the efforts of the staff of the Wetland Department.

In his closing remark, he mentioned that the project had reached its mid-point amidst challenges. He however stated that there are enormous tasks to be talked ahead that calls for more commitment by all stakeholders.

He concluded by thanking the Ministry for hosting this JCC meeting and expressed his appreciation to all the participants who were present and wished them fruitful deliberations.

MIN 4/2013/JCC3 MINUTES OF THE PREVIOUS MEETING AND FOLLOW UP ACTIONS.

NO	Key Reactions
	<p>Minutes of the previous meeting were approved as the correct document of what transpired in the 2nd JCC meeting held on 31st January 2013, after some corrections were made.</p> <p>Matters arising from the previous minutes:</p> <p>The chairman wanted to have information from Ministry of Finance regarding the budget provisions for the next Financial year. One of the members informed the meeting that the officer from Ministry of finance had apologised for not attending the meeting due to some other activities she was finalising upcountry.</p> <p>Recommendation:</p> <p>He expressed his concern as being the challenge of the limited budgetary allocation to all people concerned with the project implementation. Arising out of that the meeting recommended as follows;</p> <ol style="list-style-type: none"> a) JICA to link up with Ministry of Finance Planning and Economic Development MFPED to streamline the issue of budgetary allocation so as to handle effectively the business in wetland Management Department. b) The budget should also focus on counterpart financing clearly shown in the financing agreement. c) Members recommended that since the project is to run for four years, and since JICA has done its supportive role, the government of Uganda should also commit it resources towards the project implementation. <p>Regarding World Bank Project.</p> <p>Members inquired to know whether the rice production project funded by the world Bank areas of Amuria, Nwoya, Iganga, Palisa, Soroti, Hoima, Serere, Bugiri, Tororo and Butaleja were not encroaching on wetland.</p> <p>Members observed that the Directorate of Water Department be invited to form part of the JCC because of its hydrological concerns. The officer from MAAIF clarified that</p>

	<p>the study will be carried out in areas of rice production with the possibility of helping the communities to grow rice without affecting the wetlands.</p> <p>He also informed members that the World Bank requirements be studied and emphasized because they value environment conservation greatly and that World Bank cannot fund any project which is not environment friendly.</p> <p>Members wanted to know whether communities in Local Governments are supportive to the project/JICA representative said that some participants were not cooperative at the start e.g. Mbale district but however later they showed willingness to cooperate when sub-county leaders sensitised them.</p> <p>Members further inquired whether district development plans included support of wetland management plan and whether district community development officers were involved at district level.</p> <p>Resolutions:</p> <ul style="list-style-type: none"> ➤ In the next meeting action progress report should accompany the minutes. ➤ Institutional involvement by including Community Development officers. <p>Clarifications and updates from the JICA Team Leader;</p> <ul style="list-style-type: none"> ➤ JICA representative clarified that the first JCC meeting was to seek for political support in the districts. ➤ Several activities were conducted including conducting a pilot project, wetland assessment etc. ➤ Health sector has also been incorporated to help provide information to help in the project. ➤ Information on wetland maps has also been obtained and website established e.g. lake kyoga and Doho Namatala. ➤ The project provided GPS with camera, computers and modems to 20 districts and data can now be accessed by these districts at any time. ➤ The website through NWIS has been set to help people access information and the methodology of assessment on eco systems can be found on that website.
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MIN 5/2013/JCC3 OVERVIEW AND PRESENTATION OF THE PROGRSS REPORT

No	Key Issues and Comments	Action
A	The Project Deputy Team Leader presented the Task Completion report which detailed the four chapters; Chapter 1 comprised of the project background, Chapter 2 summarised the major accomplishments within the first phase. Chapter 3 presented key issues of the project and lastly Chapter 4 identified the activities in the second phase of the project. The detailed report booklet was presented to all members who attended the 3 rd Joint coordination committee (JCC) meeting on the 6 th November 2013.	

MIN 6/2013/JCC3 OPEN FORUM

No	Issues /Comments discussed	Action
A	<p>During the general discussion members wanted to know from the JICA representative, the extent of community based organisations involvement initiatives in the project implementation and whether they can be supported.</p> <p>Also members wanted to know whether the Directorate of Water Development (DWD) management is involved to identify water catchment areas.</p> <p>Members suggested that there is need to increase membership of JCC to include a focal person for gender.</p> <p>Members observed that there is a need to control soil erosion towards</p>	

	<p>Doho – Namatala and Bukedea District to protect water catchments. Members wanted to first address the reason why people are encroaching on wetlands majorly for livelihood.</p> <p>Clarification The JICA deputy team leader clarified that the information on integrated data is available and will be circulated to key stakeholders involved in the project implementation process. Regarding the soil erosion concern, he explained that pilot projects included management intervention for controlling soil erosion in Bududa and Manafwa in Doho-Namatala and Sironko and Bukedea in Awoja Wetland systems. Members further inquired if wetland staff were adequately trained on the application of the NWIS tool for information gathering and wondered whether there is any plan for training them.</p> <p>JICA Team leader s response The project deputy team leader informed members that in the month of September and October 2013 training was done initially for the wetland department staff and thereafter for the district officers nation-wide. Members were concerned to know whether the project goal and objectives was clearly shown to the people and whether their knowledge, skills and attitude turned positive towards project implementation, involvement and ownership. Members suggested that there is need to come out with a strategy at community based management level to sustain the wetlands. They also wanted to know whether the stakeholders such as Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), National Environment and Management Authority (NEMA) are involved in using National Wetlands Information System (NWIS).</p> <p>Recommendations After the lengthy discussion members came out with the following recommendations:</p> <ul style="list-style-type: none"> ➤ That the scope of the current project be widened to include more stake holders i.e. Ministry of Gender Labor and Social Development (MGLSD), Ministry of Local Government (MoLG) etc. ➤ There is need to monitor and evaluate the information on the website to know who to access it and for what reason. ➤ There is need to get an independent review of the project different from the staff by involving an independent consultant. On this note JICA explained that the department staff can ably handle the exercise. ➤ The relevant ministries to initiate other projects to sustain livelihood so that people are diverted from using wetlands for cultivation. ➤ Government of the Republic of Uganda through relevant inter-ministerial committees and JICA be contacted to provide resources to sensitize the people on dangers of wetland encroachments since MAAIF has limited resources to handle the tasks. ➤ The wetland management project implementation requires multi-sectoral approach. <p>Clarification from JICA Team Leader The deputy team leader explained that efforts have been done to involve other multi-sectoral areas such as MoLG, NEMA, MAAIF etc. and that he looked forward for concerted effort to have the project</p>	<p>JICA</p> <p>JICA & WMD</p> <p>JICA</p> <p>JICA</p> <p>Government of Uganda</p> <p>Government of Uganda</p> <p>JICA members</p> <p>JCC members</p>
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	implemented successfully. He reiterated that the citizens of Uganda should take the lead at both levels national and local to ensure wetlands are protected against any destruction.	
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MIN 7/2013/JCC3 CLOSING REMARKS

The chairman concluded by thanking the technical team for their fruitful deliberations and looked forward to the smooth implementation of the project and wished the participants a Merry Christmas and a Prosperous New 2014. Having no any other business, the meeting was closed at exactly 1:00 PM.

MINUTES OF THE 4th JOINT COORDINATION COMMITTEE MEETING (JCC) ON NATIONAL WETLANDS MANAGEMENT PROJECT HELD ON THE 19TH MARCH 2014 10:15AM IN THE CONFERENCE ROOM AT FAIR WAY HOTEL.

MEMBERS PRESENT

1. Mr. Paul Mafabi	Director, DEA-MWE (Chairman)
2. Mr. Hirofumi Hoshi	Chief Representative (JICA, Uganda Office)
3. Ms. Lucy Iyango	Assistant Commissioner/WMD
4. Mr. Yasuhiko Muramatsu	Deputy Team Leader, JICA TAT
5. Mrs. Eva Kyobe Office)	Programme officer (JICA, Uganda
6. Mr. Nabasa Herbert	District Support officer (NEMA)
7. Mrs. Muhenda Jane M	Secretary JICA /CTII Project
8. Mr. Ekadu Silas	Senior Engineer (MAAIF)
9. Ms. Eva Lwanga	Senior Hydrologist (MWE)
10. Mrs. Angella Rwabutomize Matsiko	Senior Economist (MFPED)
11. Mr. Kizito Simon	Senior Inspector (MOLG)
12. Ms. Florence Grace Adongo	Commissioner (WOM) DWRM/MWE
13. Ms. Emi Sunohara	Representative (JICA)
14. Ms. Imalingat Agnes Nyangan	Analyst (DWRM)
15. Ms. Riai Yamashita	JICA, TAT

ABSENT WITH APOLOGY

Mr. David O. Obong Permanent Secretary (MWE)

AGENDA

Opening prayer and self introductions

Opening Remarks

Chairman

JICA Representative

Minutes of the previous meeting and follow up actions

Overview and presentation of the Work plan

Closing Remarks and Adjournment of the meeting

MIN 1/2014/JCC 4: OPENING PRAYER AND SELF INTORDUCTIONS

The Chairperson called the meeting to order at 10:15 and welcomed members to the meeting and the Chief Representative of Japan International Cooperation Agency {JICA}. He invited the Team Leader National Wetland Management Project Mr.

Yasuhiko Muramatsu to lead the opening prayer which was followed by self introductions of the members.

MIN 2/2014/JCC4: COMMUNICATION FROM THE CHAIR

The Chairperson welcomed members to the meeting and thanked them for finding time to attend despite their busy schedules. He apologised for the absence of the Permanent Secretary who was supposed to chair this 4th Joint coordination committee meeting but in vain due to other un avoidable official duties

He appreciated the support from Government of Japan through Japan International Cooperation Agency {JICA} and the continued involvement of Local Government in the project implementation. He was pleased by the commendable work that has been done so far on the project implementation.

The chairperson informed members that around mid April 2014 or on an agreed date, an arrangement would be made for the JICA Chief Representative to pay a curtsey visit to the Permanent Secretary Ministry of Water and Environment to brief him on the progress of the implementation of the project and also discuss on other emerging issues that require the attention of the Permanent Secretary.

The chairperson informed members that the project had made considerable progress to be appreciated by the members in that meeting, considering all challenges that were faced in the first phase of the project implementation.

The Chairperson requested members to use that forum to discuss the work plan of the 2nd phase for the implementation of the project. Given the short time remaining for the project implantation, members were urged to expedite the planning process to ensure the smooth implementation of the remaining part of the project.

On behalf of the Ministry the chairperson regretted the incident that happened on 22nd Jan 2014 during the launch of the Framework Management Plan of Doho – Namatala wetland Management System. He gave a brief explanation of what transpired in Mbale where the community around Doho- Namatala wetland area violently attacked the project launching team of key stakeholders headed by the Minister of State for Environment Hon. Flavia Munaba.

That community mistook the project launching team to be investors who had gone to grab their land.

He informed members that the Government at the cabinet level is discussing a paper intended to cancel all land titles issued within the wetlands in the country.

In his concluding remarks the chairperson once again extended his sincere thanks to the Government of Japan through Japan International Cooperation Agency {JICA} for the support provided to the Ugandan Government through the project both in form of technical assistance and financial support.

He was grateful for the visit of Dr. Hasegawa to him two weeks ago and for a fruitful discussion the two held concerning the project progress review which will be held later this year.

In their discussion they debated on the possibility of calling for a symposium on wetland management for Africa similar to that of Asia wetland symposium that is held once every three years.

He further said that they are in the process of preparing a concept paper which would be shared with Ramsar secretariat and JICA to go through so as to mobilize for funds to support the symposium and to participate in the RAMSAR convention which is to take place in Uruguay next year.

He noted that it is relevant for the project to share some of the lessons learnt through this process with other African courtiers. There after he invited the JICA representative for the presentation

a. JICA Representative Presentation

The JICA representative in his communication expressed great pleasure and privilege for being once again part of important Joint Coordination Committee (JCC) meeting that constituted a project milestone of the National Wetland Management Project. On behalf of Japan International Cooperation Agency (JICA) the JICA representative thanked all members for taking time to be part of the meeting amidst their busy schedules and offering their contribution to the successful implementation of the project.

He communicated the following:

Thanked the Ministry of Water and Environment particularly the Permanent Secretary and the Director of Environmental Affairs for their continued commitment of playing a decisive role in implementing the project. That without their enthusiasm and passion, the project could not have reached this point with the major deliverables.

He celebrated the successful project results accomplished during the first phase.

Informed members that the 4th JCC meeting was to mark the beginning of the second phase; and as we prepare for the mid-term review and proceed to the second phase we needed to re-visit our project plan and identify pertinent issues and challenges to the project.

He appreciated the efforts and commitment of the Wetland Management Department and that of the relevant district officers in implementing the project.

He congratulated them upon the achievements made within the first phase and for the successfully carrying out majority of the tasks. He was also glad to know that the second phase had commenced and is proceeding as scheduled.

He was delighted to know that the National wetlands Information system {NWIS} was now operational and accessible through internet and that it would be tested on its operationalization and functionality at the various districts. He was further grateful to know that the Wetland Management Department has completed training of district officers nationwide on the National Wetland Information System. He therefore believed that the district officers all over the country are now able to access information from National Wetland Information System using the relevant equipments received under the project.

He urged the various ministries to access the National Wetland Information System (NWIS) and identify gaps in the system for improvement during the project phase.

He was happy to note that the Wetland Department had completed the training on the National Wetland Information System for Wetland Management Department and project implementation

In concluding his remarks, the JICA, Uganda Country Representative acknowledged that the project had managed to attain a lot of progress despite experiencing some challenges. He however reiterated the fact that enormous tasks remained, calling for more commitment by all stakeholders. He then thanked the Ministry for hosting the JCC meeting and expressed his appreciation to all the participants who were present and wished them fruitful deliberations.

Issues arising from the communication

MIN 3/2014/JCC4: MINUTES OF THE PREVIOUS MEETING AND FOLLOW UP ACTIONS

Minutes of the 3rd JCC meeting held on 6th November 2013 were confirmed as a true record of what transpired.

MIN 4/2013/JCC34: OVERVIEW AND PRESENTATION OF THE WORKPLAN

The Project Team Leader presented the National Wetland Management project work Plan phase II report. The framework of his work plans divided in three chapters; the first chapter identifies the key tasks to be performed highlighting the overview of the activities, Description of activities and other important events. The second chapter presents the project time line showing the schedule of the activities and the mobilisation plan while the third chapter presents the project reports and key deliverables.

MIN 5/2013/JCC4: OPEN FORUM

Matters arising from the open discussion:

- Members inquired to know whether these project activities are catered for in the next year's Ministry budget.
- Members were concerned of the missing budget in the project work plan. The team leader clarified that some emerging issues in the course of the project implementation will have to be funded by the Uganda Government.
- Members wanted to know what those emerging issues are and they wanted to know whether their funding gaps would not affect the project implementation. The project team leader promised to discuss case by case with other JICA Members and in order to establish whether the funding can be secured.
- Participants were interested to know whether the Directorate of water management plan would not conflict with that one of the Ministry of Water and Environment since all are targeting the same wetland areas.
- The team leader responded by saying that wetland project management is more interested in supporting activities that will protect river banks and tree planting.
- A member asked whether the remaining project areas will not attract a similar violence like that one of Mbale on Doho- Namatala wetland system and they wanted to know if there are other emerging risks and how they can be mitigated.
- The chairperson said that to mitigate risks of violence there is a need to involve political leaders and sociologists to talk the people to own the project. In addition to that the team leader also clarified that the Mbale Kamonkoli communities needed to have a pilot project first to enable them accept it. Violence came in as a result of lack of sensitisation and the community approached the project team with a lot of fear and suspicion.

Resolutions arising from discussion

- ✓ Commissioner of water management zone to work with commissioner wetland management and come out with a harmonised stand regarding the project implementation to avoid role conflict.
- ✓ Local communities be involved in project implementation in every sub county.
- ✓ The project team leader however said that communities will be involved at pilot level involving sub county chiefs and Parish chiefs but not all communities because they seem to be expecting a lot than what the project can handle.

- ✓ Priority environmental activities at parish, sub county and district level be integrated in a bigger national wetland management frame work plan.
- ✓ A team comprised of commissioner for water management and commissioner for wetland management should study the plan and come out with a list of activities which are done in areas of Manafwa and Mbale and thereafter the terms of reference on what they should do be exactly drawn out.
- ✓ There is need to clarify on the time frame since consultancy services are given four years and the project is to run for five years.
- ✓ The team leader emphasized on the urgent step needed to do irrigation by the government so that people destroying wetlands can have the alternative water source.
- ✓ There is need to do a midterm review to evaluate the project implementation.

MIN 6/2013/JCC4

CLOSING REMARKS

After a lengthy deliberation a member moved the motion seeking to approve the project work plan, the members agreed anonymously to approve the project work plan as presented by the team leader of the project. The Chairperson thanked all the members together with the team leader for their fruitful discussion and wished them the glad tidings of Easter season.

There being no other business the meeting was adjourned at 1:00 p.m.

No	Action Point	Action By
1	Commissioner Water Management together with Commissioner Wetland Management work hand in hand to harmonise stand regarding the project implementation to avoid role conflict	WMD,
2	Local communities be involved in project implementation in every sub county	JICA/Local Governments
3	Priority environmental activities at parish , sub county and district level be integrated in a bigger national wetland management framework management plan	JICA/WMD
4	Need by the government to do irrigation so that people destroying wetlands can have an alternative source of water	Ministry of Water and Environment Inter-Ministerial Committees and JICA
5	There is need to do midterm review to evaluate the project implementation	JICA/ WMD

MINUTES OF THE 5th JOINT COORDINATION COMMITTEE MEETING (JCC) ON NATIONAL WETLANDS MANAGEMENT PROJECT HELD ON THE 19TH JUNE 2014 10:15AM IN THE CONFERENCE ROOM AT FAIR WAY HOTEL.

MEMBERS PRESENT

1. Mr. Paul Mafabi Director, Directorate of Environmental Affairs, Ministry of Water and Environment, Chairman
2. Ms. Lucy Iyango Assistant Commissioner, Wetland Management Department, Ministry of Water and Environment
3. Mr. Byanguye Moses Senior Inspector, Ministry of Local Government
4. Mr. Nabasa Herbert District Support officer, National Environmental Management Authority
5. Ms. Eva Lwanga Senior Hydrologist, Ministry of Water and Environment
6. Mr. Ekadu Silas Senior Engineer, Ministry of Agriculture, Animal Industry and Fisheries
7. Mr. Oloya Collins Commissioner, Wetland Management Department, Ministry of Water and Environment
8. Mr. Kyambadde Richard Senior Wetland Officer-Research and Development, Ministry of Water and Environment
9. Mr. Gokaka Geoffrey Wetland Officer, Ministry of Water and Environment
10. Eng. Ronald Kato Kayizi Principle Agricultural Officer, Irrigation and Drainage, Ministry of Agriculture, Animal Industry and Fisheries
11. Mr. Hirohito Takata Team Leader of the monitoring mission, Director, Forestry and Nature conservation Division 2, Japan International Cooperation Agency, Tokyo
12. Mr. Motohiro Hasegawa Senior Advisor, JICA Tokyo
13. Mr. Naoki Tanaka Planning and Coordinator, JICA Tokyo
14. Ms. Emi Sunohara Representative, JICA Uganda
15. Ms. Eva Kyobe K Programme officer, JICA Uganda
16. Mr. Yusuke Haneishi Planning Advisor to Ministry of Agriculture, Animal Industry and Fisheries, JICA
17. Mr. Yasuhiko Muramatsu Team Leader, JICA Team
18. Mr. Hiroyoshi Chujo Ecosystem Survey Expert, JICA Team
19. Mr. Koichi Hasegawa GIS/Database, JICA Team
20. Mr. Hiroshi Narusawa Livelihood Improvement/Coordinator, JICA Team
21. Ms. Muhenda Jane M Secretary JICA team

ABSENT WITH APOLOGY

Mr. David O. Obong	Permanent Secretary, Ministry of Water and Environment
Ms. Florence Grace Adongo	Commissioner, Water Quality Management Department, Ministry of Water and Environment

AGENDA

1. Adoption of Agenda
2. Opening prayer and self-introductions
3. Opening Remarks
 - a. Chairman
 - b. JICA Representative
4. Review of Minutes of the previous meeting and follow up actions
5. Presentation of the Mid- term Monitoring
6. Open Forum
7. Closing Remarks and Adjournment of the meeting

MIN 1/2014/JCC 5: ADOPTION OF THE AGENDA, OPENING PRAYER AND SELF-INTRODUCTIONS.

The Chairman called the meeting to order at 10:15 and he then welcomed members to the meeting at 10:15 and invited the Team Leader National Wetland Management Project Mr. Yasuhiko Muramatsu to lead the opening prayer which was followed by self-introductions of the members.

MIN 2/2014/JCC5: COMMUNICATION FROM THE CHAIR.

(a) Remarks by the Director of Environmental Affairs

In his opening remarks, the Chairman thanked members for finding time to attend the meeting despite their busy schedules. He apologised for the absence of the Permanent Secretary who was supposed to chair this 5th Joint Coordination Committee meeting but could not due to other official duties.

He then extended his sincere thanks to the Government of Japan for the support to the wetlands management project through Japan International Cooperation Agency (JICA). He requested the team leader of the JICA monitoring mission to extend his appreciation to the Government of Japan for her technical assistance and financial support. The chairman also appreciated the role played by the Joint Coordination Committee specifically the strategic guidance provided in the project monitoring.

Salient issues to note:

The chairman requested members in their deliberations to consider salient issues such as project sustainability, counterpart funding, possibility of project extension and collaboration between Ministry of Agriculture and Animal Industry and Ministry of Water and Environment in the project implementation process.

In his concluding remarks, the chairman thanked the Team Leader National Wetland

Management Project Mr. Muramatsu and the project technical team for their efforts and input which is reflected in timely execution of planned output. He then invited Mr. Takata from JICA Headquarter in Tokyo to make his remarks.

(b) JICA Representative Remarks

The JICA representative in his communication expressed great pleasure and privilege in participating in the 5th JCC meeting, a key milestone of the National Wetland Management Project. On behalf of JICA, the representative expressed their appreciation to all members of the JCC for their contributions towards the successful implementation of the National wetland Management Project.

He appreciated the efforts of the Ministry of Water and Environment, particularly the Permanent Secretary and the Director, Environment Affairs, for their continued support and commitment towards the timely implementation of the project. He further commended the technical counterparts from the Wetland Management Department and the Local Government Officers for their enthusiastic and diligent participation in implementing the Project.

Informed members that in the last couple of days, JICA in collaboration with Ministry of Water and Environment and selected Local Governments had participated in the mid-term monitoring of the project in the Awoja and Doho - Namatala Systems to assess the project progress, identify issues and challenges to the project. He further informed members that the 5th JCC meeting would discuss the progress of the project and the emerging issues from the mid-term monitoring process.

He congratulated the project team on the achievements made within the first phase of the project and hoped that the second phase would proceed as scheduled. Members were informed that the project was now preparing for the 4th output involving the development of the Community Based Wetlands Management Plans which would inform the selected pilot activities.

Members were informed that the Government of Japan through Japan International Cooperation JICA would provide assistance to Government of Uganda through the Ministry of Agriculture, Animal Industry and Fisheries to implement a project on Rice Irrigation Scheme development in Central and Eastern Uganda. He also indicated that potential sites of this project may be in the National Wetlands Management Project area and therefore required strong cooperation and coordination between the two projects stakeholders since interference is anticipated to avoid negative impacts on the involvements made by the National Wetlands Projects. He informed to members that the past phase of the project had been successful although with some challenges which should be jointly tackled in the next phase through continued cooperation and dialogue to ensure the fulfilment of the project goal.

He concluded by informing members that Japan International Cooperation Agency (JICA) was glad to be part of Uganda's development efforts and was looking forward to continually working together with the Ministry of Water and Environment.

He thanked the Ministry of Water and Environment (MWE) for hosting the 5th Joint Coordination Committee meeting and once again expressed his appreciation to all participants who were present and wished them fruitful deliberations.

MIN 3/2014/JCC5: MINUTES OF THE PREVIOUS MEETING AND FOLLOW UP ACTIONS

Minutes of the 4th JCC meeting held on 19th March 2014 were read, reviewed and confirmed as a true record of what transpired during the deliberations.

Matters arising from the previous minutes:

Members sought clarification from the two Commissioners of Water Resource Regulations and Planning and Wetlands Management Department on the harmonisation and collaboration between the two departments regarding the wetland project and the catchment management zone activities. The Commissioner of Wetland Management Department informed that the two departments were working closely and complemented each other in the process of project implementation and execution of catchment management zone activities.

The National Wetlands Management Project Team Leader clarified that collaboration from the two departments already existed, and hoped that it would continue for the smooth implementation of the project.

Resolution:

The meeting resolved that the two Commissioners prepare a report to the Joint Coordination Committee members about the collaboration and the role of each department in the project processes and give feed back to the next JCC meeting.

(a) Involvement of the Local Governments:

Members sought clarification on whether the local Governments were involved in the process of the project implementation. In his response to the members the Team Leader of the project clarified that already the District officials have been involved in the information exchange.

In addition, the Technical staff and local council leaders of 124 sub-counties were involved during the preparation of the Sub county Wetland Management Action Plans (SWAPS).

(b) Irrigation

Members were updated that the Joint Coordination Committee was going on with its work but they needed to co-opt the Director of Water Resource Regulations and Planning and the Director, Environment Affairs.

It was observed that there is need for the Ministry of Water and Environment (MWE) to designate the counterpart members to be part of the scheduled Joint Coordination Committee meeting for the Rice Irrigation Scheme Development Project.

MIN 4/2014/JCC5: PRESENTATION OF THE OVERALL PROJECT PROGRESS REPORT

The Project Team Leader National Wetland Management project, presented the overall project progress report jointly with the three other Wetland Department technical staff namely Mr. Kyambadde Richard Senior wetland officer Research

(SWO/R), Mr. Gokaka (Geoffrey, Wetland Officer(WO) and Ms. Iyango Lucy, Assistant Commissioner Wetland Department highlighting the key five project outputs as follows;

- Output 1: National Wetland Information System is upgraded and functional
- Output 2: Scientific information on target wetland systems is available
- Output 3: Wetland management plans are prepared
- Output 4: Pilot activities for wise use of wetlands are implemented based on wetland management plans
- Output 5: Wetland management officers' capacity is strengthened

MIN 5/2014/JCC5: PRESENTATION ON THE MID – TERM MONITORING

The Eight Japanese experts of JICA Project Monitoring Team represented by Mr. Hasegawa presented a summary of the monitoring activity for the National Wetland Management Project (NWMP). The summary focused on the following areas of expertise; Wetland Management/Governance, Watershed Management, Eco-system conservation, Community development, Local Governance, Livelihood improvement, Environmental economics and Database/GIS.

Six Japanese experts were assigned to undertake the activities during phase 2 of the project implementation. Their expertise were 1) Wetland Management/Governance, 2) Ecosystem Conservation, 3) Community Development I, 4) Community Development II/Local Governance, 5) Livelihood Improvement/Coordinator and 6) Database/GIS. On the other hand, the Wetlands Management Department mobilized nine officers in the 1) Planning and 2) Research and Development.

Logistical support and capacity building;

The report highlighted the equipment provided to Ugandan Government by the Government of Japan at Wetland Management Department and the 20 Project Districts that participated in the phase 1 of the project implementation. Equipment including Vehicles, Desktop computers, Laptop computers, Printers, Global Positioning System with cameras, Stabilizers, internet modems, National Wetlands Information System software and for technical training in Japan for Ugandan selected project staff has been done.

The report provided details on project progress activities, Achievements on Outputs, Achievements on the project purpose, changes of risks and actions for mitigation, progress of actions undertaken by JICA, Progress of actions undertaken by Government of Uganda, Progress of environmental and social considerations, Progress of considerations on Gender/Peace building/Poverty reduction and other related factors affecting the project such as JICA's projects, activities of counterparts, other donors, private sectors, and NGOs.

Further the report presented the modification of the project design document (PDM). The summary of the modification is as follows:

In the previous PDM, activities for preparation of SWAPs were not itemized; though they were prerequisites for DWAPs preparation. Thus the phrasing of activities for Sub-county Wetland Action Plans were clarified and modified.

Activity 3.6 Develop Sub-county Wetland Action Plans with support from parish representatives.

Activity 3.9 Review and update Wetland System Management Plans, District Wetland Action Plans and Sub-county Wetland Action Plans

The activities for support of pilot project had been narrowly defined as training. However it was modified to broaden the scope of support as follows.

Activity 4.5 Support the communities in implementing the Pilot Projects.

Performance indicators for Output 5 on Nation-wide training were clarified and modified.

- At least 50% of the district officers in charge of wetland management over the country can understand and can use the wetland management manual.

Indicator of Project Purpose was rephrased to make it practical.

- Ecological character of the pilot sites shows no changes or improvement in pilot sites based on the ecological monitoring plans of each site.

MIN 6/2014/JCC5: OPEN FORUM

Matters arising from the open discussion:

- Members inquired on the exact duration and when it winding up.
- Members were appreciative of equipment provided by JICA, software with the related gadgets, but wanted to know their life span after the winding up of the project. It was not also clear from members whether the districts' plans and budgets would provide for the gadget's maintenance.
- On the assets life span the team leader informed members that computers and UPSs life span is 5-6 years and thereafter can be replaced.
- Regarding project areas where clashes had been experienced and the misreporting by the media, members wondered whether the media chose to go with anybody they wished and report anything they felt like reporting.
- On the media misrepresentation, the team leader clarified that apart from reporting the correct date for the project framework management plan launching ceremony of Doho-Namatala wetland system the rest of the reported information was wrong.
- Members were urged to reignite harmony between the project team leaders and the community around Doho–Namatala area, the Mbale District chairperson convened a meeting and apologised to the minister of Environment on behalf of the chaotic community for their grave misconduct after being misguided by the people with selfish motives.

Summary of Presentation from the Senior Advisor (JICA HQ)

The Senior Advisor JICA presented a report on the project sustainability and monitoring. The following were the salient issues.

He emphasised rice irrigation scheme development would enhance conservation of

water resources; pinpointed the need to integrate agriculture and environmental sectors more specifically wetlands management through open forum to harmonise development with conservation. This harmonization process should be rendered both by the government and the communities. He further suggested enhanced use of NWIS in the project implementation process through a formal manner.

He recognized the need to organise a regional symposium in Asia and Africa to enhance rice growing studies; and suggested a resolution by Africa on rice studies by year 2018 to be proposed.

He further requested the project team together with the Wetland Management Department present a proposal in the next Joint Coordination Committee meeting so as to enable members guide them on what should be included in the project extension; recognized the need for series of joint workshops and dialogues necessary for this project to all those communities using the wetland and National level.

He suggested that JICA together with Ministry of Water and Environment (MWE) monitor the progress of the project regularly i.e. every 6 months.

He concluded his report by emphasising the needs for exerting synergistic effects through collaboration between the Wetlands Management Department and the Ministry of Agriculture, Animal Industry and Fisheries.

MIN 6/2014/JCC5 CLOSING REMARKS

In his closing remarks, the chairman thanked the technical team together with the team from JICA Headquarters for the guidance provided towards the project implementation. He wished the JICA monitoring team safe journey.

There being no other business for discussion the meeting was adjourned at 1:30 p.m.

Following action points will be presented and discussed during the next Joint Coordination Committee meeting.

No	Action Point	Action By	Status
1	JICA together with Ministry of Water and Environment (MWE) monitor the progress of the project regularly i.e. every 6 months.	MWE and JICA	After the last JCC in June, JICA sent Dr. Motohiro Hasegwa to participate in the workshop on 17 th October for harmonization between wetlands and rice projects.
2	Need to harmonise rice growing project and wetland management by the government and the communities	JICA/Local Governments	The workshop convened on 17 th October was the first coordination meeting between the two projects. It is expected to become a periodic meeting to ensure wetland – rice issues are adequately managed and addressed in a timely manner. Further harmonization activities will be proposed and implemented throughout the projects implementation.
3	A proposal on the project extension to be presented to the next JCC.	JICA project Team/WMD	It was proposed in Chapter 3 of this report. The activities proposed would be refined and further detailed through progressive elaboration.
4	Need to merge agriculture sector and environmental sector with open forum to harmonise nature conservation.	Ministry of Water and Environment, MAAIF and JICA	The workshop convened on 17 th October was the first coordination meeting between the two projects.
5	There is need to organise a regional symposium in Asia and Africa to enhance rice growing studies.	JICA/ WMD	The issue was discussed and generally agreed to convene such meeting. It is presented in Chapter 3 of the report.

MINUTES OF THE 6th JOINT COORDINATION COMMITTEE MEETING (JCC) ON THE NATIONAL WETLANDS MANAGEMENT PROJECT, HELD ON THE 19TH NOVEMBER 2014 AT FAIR WAY HOTEL, KAMPALA

JCC MEMBERS PRESENT

- | | |
|------------------------------------|--|
| 1. Mr. Paul Mafabi | Director, DEA-MWE (Chairman) |
| 2. Mr. Yasuhiko Muramatsu | Team Leader, JICA TAT |
| 3. Ms. Eva Kyobe K | Programme officer (JICA, Uganda Office) |
| 4. Mr. Nabasa Herbert | District Support Officer (NEMA) |
| 5. Ms. Eva Lwanga | Principal Hydrologist (MWE) |
| 6. Ms. Florence Grace Adongo | Commissioner (WQM) DWRM/MWE |
| 7. Ms. Angella Rwabutomize Matsiko | Principal Economist (Ministry of Finance Planning and Economic Development (MOFPED)) |
| 8. Ms. Imalingat Agnes | Analyst-Water Quality Mgt Department |
| 9. Ms. Charity Rutaremwa | Asst. Commissioner (MGLSD) |
| 10. Mr. Atim Joel | Senior Inspector (MOLG) |
| 11. Mr. Kyosuke Kawazumi | Chief Representative JICA Uganda |
| 12. Mr. Yasumichi Araki | Senior Representative JICA Uganda |

MEMBERS IN-ATTENDANCE

- | | |
|-------------------------|--|
| 1) Mr. Narusawa Hiroshi | JICA/TAT Wetland Project |
| 2) Mrs. Muhenda Jane M | Secretary JICA /CTII Project/Recording |
| 3) Mr. Kasaga Wegishi | PISD JICA Study Team |
| 4) Mr. Inoue Shigeru | Expert JICA/NWMP |

ABSENT WITH APOLOGY

- | | |
|------------------------|--|
| 1. Ms. Lucy Iyango | Assistant Commissioner Wetlands Management |
| 2. Ms. Norah Namakambo | Principal Wetlands Officer (MWE) |
| 3. Mr. Silas Ekadu | Senior Engineer (MAAIF) |
| 4. Mr. Oloya Collins | Commissioner Wetlands Management |

AGENDA

1. Opening prayer, self introductions and adoption of the agenda
2. Opening Remarks
 - a. Chairman
 - b. JICA Representative
3. Review of Minutes of the previous meeting and follow up actions
4. Presentation of the Task Completion Report
5. Open Forum
6. Closing Remarks and Adjournment of the meeting

MIN 1/2014/JCC6: OPENING PRAYER, SELF INTRODUCTIONS AND ADOPTION OF THE AGENDA

The Chairman welcomed members to the meeting at 10:30am and invited a volunteer to lead in the opening prayer which was followed by self introductions by members. The Agenda was read to the members and was adopted as presented

MIN 2/2014/JCC6: Opening Remarks

(a) Chairman's Opening Remarks

- In his opening remarks, the Chairman warmly welcomed the members and thanked them for finding time to attend the meeting despite their busy schedules.
- He also warmly welcomed Mr. Kawazumi the new Chief Representative JICA Uganda Office to the 6th Joint Coordination Committee (JCC) meeting.
- He expressed his gratitude to the Government of Japan through the Chief Representative of Japan International Cooperation Agency (JICA) for the technical and financial support provided to the Ugandan Government through different programmes being implemented.
- The Chairman called for formation of synergies and modalities to achieve the objectives of this project, and to be mindful of other economic projects already taking place such as the irrigation rice scheme project and other projects of high economic values that have strong impact on the economic development of the country.
- Regarding counterpart funding the Chairman called for the need for innovative ways to look for counterpart funding in order to ensure project sustainability. This strategy should be included in the budget if more financial resources are to be raised
- Looking at the two years left to end the project,
- The Chairman concluded his remarks with appreciation for the support of conditional grant given to the project Districts and thanked the Team Leader for the technical backstopping work and support supervision in the field. He also applauded the three trainings on wetland management planning so far achieved as well as the smooth progress of the project execution to date. He then invited the Chief Representative JICA Uganda Mr. Kyosuke Kawazumi to give his remarks.

(b) The Chief Representative JICA Uganda – remarks

- The Chief Representative JICA Uganda Mr. Kyosuke Kawazumi expressed his gratitude to participate in the 6th Joint Coordination Committee (JCC) meeting on behalf of Japan International Cooperation Agency (JICA).
- He expressed his heartfelt thanks to all members of JCC and other participants for honoring the invitation to the meeting and commended the Ministry of Water and Environment, for the continued support and commitment in the implementation of the project.
- Mr. Kyosuke Kawazumi informed members that JICA focuses on the following four priority areas in Uganda;

- (1) Economic infrastructure,
- (2) Agricultural development,
- (3) Basic human needs and
- (4) Northern Uganda reconstruction programme.

He informed members that through efforts of cooperation, JICA wishes to contribute to the development of Uganda, as envisioned by the “Uganda Vision 2040”, the “National Development Plan”, and the initiatives of Tokyo International Conference on African Development (TICAD).

He reminded members that, the National Wetlands Management Project had entered its next phase which involves the implementation of the selected pilot projects; on the other hand, the Project on Irrigation rice Scheme Development Project under the Ministry of Agriculture Animal Industry and Fisheries was conducting a feasibility phase and the potential irrigation sites are relatively within the National Wetlands Management Project geographical location. As such it is important that synergies and areas of collaboration between the two projects are identified in order to ensure effective implementation as well as balance between conservation and development.

In this same regard, the Chief Representative informed members that a symposium had been held between the Ministry of Agriculture Animal Industry and Fisheries (MAAIF) and Ministry of Water and Environment (MWE) in order to streamline collaboration. He hoped that the agreed action plan from the symposium would be implemented in line with wetland management principles and the wise use concept.

He further informed members that the Ministry of Foreign Affairs of Japan would publish an annual status report on Official Development Assistance, formally known as Japan’s ODA White Paper in which the National Wetlands Management Project will be featured.

Once again he commended the Ministry of Water and Environment (MWE) for setting aside a budget to cater for the National Wetland Information System (NWIS) for the next one year, and hoped that this would follow for other project activities contributing to project continuity and sustainability both at national and district level.

Members were informed that so far 80% of the project activities had been successfully completed although, with some challenges.

He advised the Project Team to take on the remaining tasks with the same commitment and then concluded by once again appreciating the efforts and commitment of the Wetland Management Department, the Project Team and the Local Government district officers in implementing the project. He congratulated them upon the achievements and for successfully carrying out the majority of the tasks. HE then pledged JICA’s commitment to cooperate with all stakeholders in ensuring that the project achieves its objectives.

He concluded his remarks by wishing all members fruitful deliberations.

MIN 3/2014/JCC6:MINUTES OF THE PREVIOUS MEETING AND FOLLOW UP ACTIONS

Minutes of the 5th JCC meeting held on 19th June 2014 were read, reviewed and confirmed as a true record of what transpired during the deliberations.

Matters arising from the previous minutes:

- Under the open forum members sought clarification on the exact period when the project is winding up. They were informed that the Project would wind up in two years time.
- It was recommended that future attendance list should specify members of JCC and others in attendance.
- It was recommended that the National Wetland Project and the Rice Irrigation Project ensure that their activities are harmonized.
- It was proposed that a six monthly Joint Project Evaluation and Monitoring of Japan international Cooperation Agency (JICA) and Ministry of Water and Environment (MWE) be conducted after JICA has confirmed its Head Quarter on the interval of monitoring period.
- The Commissioner Wetland Management was tasked to analyse the 2 policy documents and establish whether there are variances and/or harmony that needed members' attention.

MIN 4/2014/JCC6:PRESENTATION OF THE TASK COMPLETION REPORT

The Project Team Leader of the National Wetland Management Project then presented the Task Completion report which covered the period from January to December 2014 and comprised of four Chapters as follows;

Chapter one covered the Project background focusing the project description, project development objectives and performance indicators, the project sites and duration.

Chapter two focused on the tasks completed during the phase of the project. It was in this chapter that the project report indicated 81% complete as of 31st October 2014 as per the activities planned to be complete by the end of the project. The five major accomplishments summarized in task completion report included the following;

- (a) Upgrading NWIS.
- (b) Wetland resource assessment
- (c) Preparing wetland management plans
- (d) Implementing pilot activities and
- (e) Strengthening institutional capacity

Chapter three of the report provided a summary of the five key issues and challenges of the project.

Chapter four gave an overview of the activities for the next phase, project reports, key deliverables and the mobilization plan.

MIN 6/2014/JCC6: OPEN FORUM

Matters arising from the open discussion:

- Members were concerned about the post 2016 period and the project sustainability, and raised the following questions;
 - How will the Integration of Sub County Wetland Management Plans (SWAPS) and the Districts and the Ministry of Local government development plans be harmonized?
 - Members also asked for clarification on the Sub-county Wetland Action Plan (SWAP) structures in sub counties. .
- Will the closure of the project at the end have an impact on SWAPs?
- Members urged JICA to work on few activities and complete them rather than spreading thin given the remaining two years to project completion.
- Members were informed that the overall goal of the project is to ensure wetlands are conserved and protected by assessing the progress of the project looking at the performance indicators and expected outputs.
- Members observed that the Wetland Management Project activities should also aim at changing people's attitudes and practices since extensive knowledge in form of trainings have been provided to them.
- Members also wanted to know whether Ministry of Local Government has a budget provision for implementing the SWAPs.
 - Members were informed that on the issue of sustainability of funding is there may be need to adjust resources internally; advantage should also be taken of the ongoing planning process which provides the opportunity to set priorities including budgeting for initiatives such as the National Wetland Management activities.
- Members were concerned that Ministry of Finance budget had as yet not integrated the National Wetland Management Project, this needs serious consideration.
 - He promised to follow up the matter of instituting as a sustainable funding mechanism in close consultation with the two governments of Japan and that of Uganda.
- Another concern raised was whether Community Development Officers had been involved in the development of SWAPs, as a way of promoting project ownership among recipient communities.
 - The Team Leader clarified that Community Development Officers had participated in the different workshops and the emphasis was given on sensitizing the communities to own the project.
 - In addition, the 5 years activity had started in areas around Bududa and Manafwa rivers and the project had been designed to ensure sustainability. In Manafwa district discussions and consultations had been made with cattle grazers for purposes of empowering them as well as creating ownership.

MIN 6/2014/JCC6: CLOSING REMARKS

The Chairman concluded the meeting and advised the project stakeholders to engage relevant institutions in the ministries and Ministry of Local Governments in particular in participatory planning and implementation of the project.

There being no other business the meeting was adjourned at 1:00 p.m.

SUMMARY OF ACTION POINTS

NO	ACTION POINT	ACTION BY	STATUS
1	Six months of the project joint evaluation and monitoring of Japan international Cooperation Agency (JICA) and Ministry of Water and Environment (MWE) be effected after JICA consulting its Head Quarter on the interval of monitoring period.	JICA Uganda and the JICA Headquarter s	The next monitoring will take place in the latter part of June or the early July 2015. It will be conducted by the project team, the WMD and the JICA Project Team. Upon the completion of the monitoring, a JCC will be convened to discuss the evaluation.
2	The two ministries advised to collaborate harmoniously for the smooth project implementation process.	MAAIF/MWE	This is an on-going process which will be harnessed and strengthened as implementation rolls out.
3	The Commissioner Wetland Management tasked to Analyze the 2 policy documents and establish whether there are variances and/or harmony that needed members' attention.	MWE	Process is on-going and areas of discrepancy will be highlighted in the course of execution of both projects, which will all be guided by the Ramsar wise use principle on wetlands
4	Ministry of Local Government to set aside funds to contribute to implementation of Sub County Wetland Management Plans (SWAPS)	MWE/MoLG	Report from MoLG
5	Establish findings on how funding mechanism can be supported by the two governments i.e. Government of Japan and Government of Uganda.	Team Leader	Funding arrangement discussion is currently on-going. As the general strategy, the team initially identifies primary beneficiaries of specific project activities and coordinate and seek possible arrangement for co-funding with the prospective beneficiaries. In Pallisa District, the team discussed contribution by the district government for tree planting for those to indicate wetland boundary.

MINUTES OF THE 7TH JOINT COORDINATION COMMITTEE MEETING (JCC) ON THE NATIONAL WETLANDS MANAGEMENT PROJECT, HELD ON THE 6TH MAY 2015 ATFAIR WAY HOTEL, KAMPALA

JCC MEMBERS PRESENT

- | | |
|---------------------------|---|
| 1. Mr. Yusuke Haneishi | Advisor /MAAIF |
| 2. Ms. Lucy Iyango | Asst. Commissioner/Chairperson |
| 3. Mr. Yasumichi Araki | Senior Representative JICA |
| 4. Ms. Emi Sunohara | JICA representative |
| 5. Mr. Yasuhiko Muramatsu | Team Leader, JICA TAT |
| 6. Ms. Eva Kyobe N | Programme officer (JICA, Uganda Office) |
| 7. Mr. Nabasa Herbert | District Support Officer (NEMA) |
| 8. Ms. Eva Lwanga | Ag. Principal Hydrologist (MWE) |
| 9. Mr. Obubu J. Peter | DWRM/MWE |
| 10. Ms. Imalingat Agnes | Water Analyst Quality Mgt Department |
| 11. Mr. Wetaya Paul | SCDO- MGLSD |
| 12. Mr. Atim Joel | Senior Inspector (MOLG) |

MEMBERS IN-ATTENDANCE

- | | |
|----------------------------|--|
| 1. Eng. Ronald Kato Kayizi | Assistant Commissioner (MAAIF) |
| 2. Ms. Riai Yamashita | JICA Team |
| 3. Mr. Zenjiro Egawa | JICA Team |
| 4. Mr. Kabaalu Deo | RWC –E/WMD/MWE |
| 5. Mrs. Muhenda Jane M | Secretary JICA /CTII Project/Recording |
| 6. Mr. Inoue Shigeru | Expert JICA/NWMP |
| 7. Paul Oyella | Sen. Eng. MAAIF |

ABSENT WITH APOLOGY

- | | |
|----------------------|----------------------------------|
| 1. Mr. Oloya Collins | Commissioner Wetlands Management |
| 2. Mr. Paul Mafabi | Director (DEA/MWE) |

AGENDA

1. Opening prayer, self-introductions and adoption of the agenda
2. Opening Remarks
 - a. Chairman
 - b. JICA Representative
3. Review of Minutes of the previous meeting and follow up actions
4. Presentation of the Work Plan III
5. Open Forum
6. Closing Remarks and Adjournment of the meeting

MIN 1/2015/JCC7: OPENING PRAYER, SELF INTRODUCTIONS AND ADOPTION OF THE AGENDA

The Chairperson welcomed members and the meeting was called to order at 10:15am and invited a volunteer to lead in the opening prayer which was followed by self-introductions by members. The Agenda was adopted without amendment.

MIN 2/2015/JCC7: Opening Remarks

(c) Chairperson's Opening Remarks

In her opening remarks, the Chairperson warmly welcomed the members and thanked them for finding time to attend the meeting despite their busy schedules.

In a special way the chairperson welcomed Mr. Kyosuki the Senior Representative JICA Uganda Office to the 7th Joint Coordination Committee (JCC) meeting.

The chairperson looked at the following key issues that formed the discussion in the 7th Joint Coordination Committee (JCC) meeting.

Output 4: which looked at strengthening capacities of both at local community level, district level and National level. She also addressed the issue of strengthening capacities of Framework Management Plans implementation at different levels not to be just left in the shelves but put to use.

She informed members that in August 2015 two people from the Wetland Management Department will be traveling to undertake wetland management capacity development plan in Japan.

The chair person was concerned with the implication of the project implementation process where there is cancelling of land titles in wetlands.

She also brought to the attention the of members the implication of the president's directive of restoring wetlands and improvement of irrigation programmers where he showed concern on how most of the wetlands are being degraded

She stated that in the next one year members needed to be sure from the Team leader whether the physical outputs will be in place i.e. resource user guidelines, Manuals to guide different process and the National Wetland Information System (NWIS) manual which are expected to be used as a management guiding tools for the road map of the project.

The chairperson was concerned with the sustainability measures to be taken after the project exit.

She was also concern with how the project management by-laws are harmonized with present legislation

She informed participants that 8 delegates from Uganda will participate in the 12th conference of parties which is scheduled to take place in Uruguay from the 1st - 9th June 2015. 7 out of 8 delegates will come from the Ministry of Water and Environment (MWE) and one from Ministry of Agriculture Animal Industry and Fisheries (MAAIF) to attend a relevant side event on the Rice Resolution.

She was pleased to inform members that so far the project is going on as scheduled and that looking at the progress made, capacity has been build and strengthened in the Wetland Management Department. And that she hoped that this capacity be translated into other projects but not to end with the JICA project

She also informed them that so far the project is moving on as planned, and happy to note that the synergies between MAAIF which is a member of advisory group and National Ramsar Convention committee is also being strengthened.

The chairperson said that members needed to harmonize the operations to avoid to duplication efforts of either party or that member should work within the government programme which is the National guiding plan of Vision 2040 to which all are activities are contributing to.

She concluded by thanking the Government of Japan for its initiative in providing technical and financial support to the Government of Uganda in as far as the implementation of the project is concerned. She finally called for participants to be candid to ensure the project is well concluded and invited the Senior Representative JICA (U) Mr. Yasumichi Araki to give his remarks.

(d) The Senior Representative JICA Uganda – remarks

The Chief Representative JICA Uganda Mr. Yasumichi Araki conveyed his sincere condolence to the Minister of Water and Environment upon the loss of his dear wife.

He expressed his heartfelt thanks to all members of JCC and other participants for their direct and indirect support in the implementation of the project. He thanked in a special way the Wetland Management Department (WMD) and the Project team, Ministry of Local Government (MoLG) and Ministry of Agriculture Animal Industry and Fisheries (MAAIF) for their cooperation and participation in the implementation of the project.

The JICA representative informed participants that the RAMSAR conference will be held in Uruguay and Ugandan delegates will attend. He looked forward that the joint activity plan between JICA and MAAIF will result into fruitful outcome

He concluded his remarks by wishing all members fruitful deliberations.

Matters arising from the chairperson's communication:

- For clear distinction between JCC members and other participants in a meeting, chairperson requested for self-introduction from the members who joined when the meeting had started.
- She continued requesting the secretariat to clarify on the attendance list by identifying the JCC members and other participant in attendance.

MIN 3/2015/JCC7:MINUTES OF THE PREVIOUS MEETING AND FOLLOW UP ACTIONS

Minutes of the 6th JCC meeting held on 19th November 2014 were read, reviewed and confirmed as a true record of what transpired during the deliberations.

Matters arising from the previous minutes:

- ❖ Members wanted to know whether the project monitoring team will involve other stake holders. The JICA representative clarified that the monitoring of the project

was carried out jointly in the previous monitoring exercise. But the next monitoring in July will be carried out mainly by the MWE and the JICA Team and endorsed by the JCC members.

- ❖ Members wanted to know whether the project policy documents were distributed up to lower level. Clarification was made to members that the policy documents were prepared and distributed to lower local governments leading to the formation of SWAPS in the local governments. While at national level MWE has integrated it in its annual work plan.
- ❖ The SWAPS & DWAPS are supposed to be integrated in the five years district development plans.
- ❖ Members wanted clarification whether the co-funding between the government of Uganda and Japan has been effected. The chairperson clarified that Ministry of Finance has no specified budget on those planned activities which are to do with project sustainability in the districts. However, she called upon districts to be creative by devising means of the project sustainability by integrating the wetland management project plans in their regular planning programmes.

MIN 4/2015/JCC7:PRESENTATION OF THE WORK PLAN III

The Project Team Leader of the National Wetland Management Project then presented the Work Plan III report which covered the period from March 2015 to March 2016 and comprised of four chapters as follows;

Chapter one covered the Project background focusing the project description which included project development objectives and performance indicators, the project sites project duration and phasing, and the scope of work.

Chapter two focused on the project approach and methodology which comprised of the overview of the project activities, major changes made in year 3 of the project and the description of the activities in year 3 which majorly looked at the five project outputs namely;

1. The National Wetlands Information System (NWIS) which is upgraded and is now functioning.
2. Scientific information of target wetlands systems
3. Wetland management plans which are prepared.
4. Pilot activities for wise use of wetlands Implemented based on wetland management plans
5. Wetland Management official's capacities strengthened.

Chapter three of the report focused on the project timeline which described schedules of the project activities and the mobilization plan.

Chapter four provided the project reports and key deliverables.

The team leader in detail, using diagrams, maps and tables, comprehensively explained the project progress summary, major changes made in the project plan, proposed livelihood options and monitoring activities, proposal on the project extension and Ramsar

rice resolution, wetland management manuals, counterpart training in Japan, assignment schedules of the Japanese experts and concluded with the reporting schedule with supportive appendices

Matters arising from the Presentation of the Work Plan III:

Members observed that districts in group c have not done well in terms of project implementation and sought clarification from the following issues;

- How are the proposed pilot projects benefiting the process of implementing it?
- How does it influence the project outcome?
- How are we empowering the communities to own the project?
- How are the communities empowered to own the project?
- How are the District community development leaders involved in the project implementation?
- Are the district entomologists involved since there is a project model about bee keeping?

MIN 6/2015/JCC7:

OPEN FORUM

- In the open forum members raised a number of issues as sited below;
- How are local governments supported in the enactment of by-laws, since it is a lengthy process involving a series of meetings by the district councils?
- How is the issue of ownership and project sustainability addressed?

Recommendations:

- Members recommended that the proposals regarding the project proposal and sustainability be competitive, so that districts, who are interested write proposals, be vetted and the winners get supported.
- That registration of wetlands be done and their numbers be established and the districts be known and location be clearly identified.

Issues of concern:

- **Tree planting:** Members raised concern that if people wanted to plant papyrus, would it be regarded as tree planting?
- **Legal framework:** Members also raised a question that what is the existing institutions and legal framework in the project implementation programme.
- **Facilitation at Districts:** Members sought clarification on the facilitation at the district level, and what would be the composition of the program implementers, and how will the pilot project tasks be shared.
- **Compliance:** Members questioned whether the problem of project implementation at the districts needed by-laws or it was just lack of enforcement at that level. Other

members wanted if the skill enhancement of the people involved in the project implementation were given due attention.

- **Integration of other projects:** Members inquired how the integration of fish farming and rice farming would be easily done since all these projects are located within the same wetlands.
- **Community involvement in the project:** How are the communities involved in the project implementation so as to contribute to the conservation of wetlands?
- **Project harmonization with other government Projects:** Members were concerned on how the National Wetland Management project taking advantage of other government projects e.g. Youth and women project, promotion of Adult Functional Literacy (FAL), Community based services (CBs) groups that are functional.
- They also inquired whether the remaining time is enough for all stakeholders to do all that is required for the project implementation.

Project Awareness Creation:

- Members sought clarification whether the project Information, Education and Communication (IE&C) strategy has been thought about. It was not also clear whether the district leadership were given the program to include it in their planning and budgeting programmes.

The Project Team Leader's Responses to the above concerns;

The project Team leader made the following clarification that the components of the project will focus also on the legal framework of fish farming in the district especially Katakwi and some of the districts.

On the project sustainability, he said that the project components proposed have considered the districts endowments where Katakwi is proposed for fishing, Bududa for bee keeping and Sironko for horticulture.

Members recommended that some areas which epi-culture is practiced may not use by-laws but just use ground rules because there is less farming in those areas.

- The team leader informed members that other department officials such as forest officers were also involved in the implementation of the project.
- Regarding IE &C the team leader explained that 3 manuals were developed for National and district officials and for operation of NWIS; and they will be disseminated in due course.
- As we report to JCC we must be clear at strategic level, funding, Reg. F.W, value for money, community ownership,

MIN 6/2015/JCC7: CLOSING REMARKS

The project team leader called for maximum collaboration from all members of all members of JCC to ensure the project becomes a success.

The chairperson concluded the meeting stating that as members report to JCC there should be a clear position at strategic level, the funding program, the legal framework, value for money and community ownership programs if the project is to be implemented as per the intended objectives.

She was thankful to members of JCC for their commitment shown by turning up in such a big number when invited. She was grateful with JICA's support and was very hopeful that the project will meet its intended purpose.

The Chairperson eventually adjourned the meeting.

SUMMARY OF ACTION POINTS

NO	ACTION POINT	ACTION BY	STATUS
1	Project team leader called for maximum collaboration to ensure the project becomes a success.	All JCC members	The project will closely collaborate with relevant on-going projects. Such meetings often take place in the field with the rice irrigation team of MAAIF/JICA and the catchment management project team of MWE/GIZ.
2	How does it influence the project outcome?	Team Leader	All the findings and lessons learned will be integrated into the model of conservation and wise use.
3	Members sought clarification whether the project Information, Education and Communication (IE&C) strategy has been thought about. It was not also clear whether the district leadership were given the program to which would be included in their planning and budgeting programmes.	Team Leader/MoLG /MWE	According to the project monitoring sheet, an estimated 221 person-days of political leaders will have been mobilized before completion of the first work package. They included Resident District Commissioner, Chief Administrative Officer, District Chairperson, Secretary for Production, Area councillors and Secretary for Environment.
4	Members wanted to know whether the remaining time was enough for all stakeholders to do whatever is required for the project implementation.	MWE/MoLG/ Team Leader	We admit that the time allotted for pilot project implementation is short as compared with the project life. It is particularly true when the project proceeds to implementation of any form of farming activity that requires a rather longer period than the project timeline. But it is understood among the relevant officers at district level that they should also seek for other fund sources other than JICA to ensure continuation of intervention.
5	In terms of Project harmonization with other government Projects, how has the National Wetland Management project taking advantage of other government projects e.g. Youth and women project, promotion of Adult Functional Literacy (FAL), Community based services	Team Leader/MoLG /MWE	Most of the pilot projects sites have leverage the existing community based service groups that may have been dormant or inactive. The project geared to enhance their capacity in managing wetland when their purpose does not contradict each other. In the implementation stage, possibility of cofounding has been and will be explored though mobilizing fund or in kind such as tree nursery when

	(CBs) groups that are functional.		applicable from other on-going projects.
6	Members to be clarified on how the integration of fish farming and rice farming would be easily done since all these project are located within the same wetland.	Team Leader/MWE	It is technically challenging according to a rice farmer in Butaleja who once endeavoured to integrate them because the growing periods are different. On the other hand, there are many farmers in South China and Thailand who maximized the benefit by integration of rice, fish and azolla where sustainable nitrogen cycle was established due to the presence of symbiotic nitrogen fixation. It was also verified by IRRI in the Philippines. One of the challenges in Uganda would be the fact that there are limited numbers of farmers who dedicated to rice cropping to exercise meticulous management of rice field. The project, if it is introduced, will start with a small scale investment to assess the feasibility.
7	How are the communities involved in the project implementation so as to contribute to the conservation of wetlands?	Team Leader/MoLG	Planning team consisting of 50 members directly participated in the planning process to integrated their views and aspiration and thus to increase sense of ownership. Selected representatives of association formed in the planning process engaged in wetland zoning process.

MINUTES OF THE 8TH JOINT COORDINATION COMMITTEE MEETING (JCC) ON THE NATIONAL WETLANDS MANAGEMENT PROJECT, HELD ON THE 21ST JULY 2015 AT FAIR WAY HOTEL, KAMPALA

JCC MEMBERS PRESENT

- | | |
|--------------------------------|-----------------------------------|
| 1. Mr. Paul Mafabi | Director (DEA/MWE) |
| 2. Mr. Collins Oloya | Commissioner WMD |
| 3. Mr. Ekadu Silas | MAAIF |
| 4. Ms. Imalingat Agnes Nyangan | Water Analyst |
| 5. Mr. Yasuhiko Muramatsu | Team Leader, JICA TAT |
| 6. Mr. Ebbu Emmanuel | Sr. Water Analyst. For COM (WQMD) |
| 7. Mr. Nabasa Herbert | District Support Officer (NEMA) |
| 8. Ms. Eva Lwanga | Ag. Principal Hydrologist (MWE) |
| 9. Mr. Shumichi Murakani | JICA |
| 10. Mr. Kyosuke Kawazumi | JICA Chief Representative |
| 11. Ms. Eunice Tumwebaze | ACC (MGLSD) |

MEMBERS IN-ATTENDANCE

- | | |
|----------------------------|--|
| 1. Eng. Ronald Kato Kayizi | Senior Engineer (MAAIF) |
| 2. Mrs. Muhenda Jane M | Secretary JICA /CTII Project/Recording |
| 3. Ms. Hisako Sumi | JICAPISD Study Team |
| 4. Ms. Rosemary Nakaggwa | GIZ |
| 5. Eng. Andrew Katto | MAAIF |

ABSENT WITH APOLOGY

- | | |
|--------------------------------|------------------------------------|
| 1. Ms. Eva Kyobe N | Programme Office (JICA (U) Office) |
| 2. Angella Rwabutomize Matsiko | Principal Economist (MOFPED) |

AGENDA

1. Opening prayer, self-introductions and adoption of the agenda
2. Opening Remarks
 - a. Chairman
 - b. JICA Representative
3. Review of Minutes of the previous meeting and follow up actions
4. Presentation of the Progress Report III
5. Extension of the Project
6. Open Forum
7. Closing Remarks and Adjournment of the meeting

MIN 1/2015/JCC8: OPENING PRAYER, SELF INTRODUCTIONS AND ADOPTION OF THE AGENDA

The Chairman called the meeting to order at 10:30am and welcomed all the members to the 8th Joint Coordination meeting despite their busy schedule.

He requested a volunteer to lead in an opening prayer which was followed by self-introductions by members. The Agenda was adopted with amendments.

MIN 2/2015/JCC8: OPENING REMARKS

(e) Chairperson's Opening Remarks

The Chairman welcomed the members and thanked them for finding time to attend the 8th Joint coordination Committee meeting.

In a special way he welcomed Mr. Kyosuke Kawazumi the Chief Representative JICA Uganda Office to the 8th Joint Coordination Committee meeting (JCC)

He thanked the Government of Japan through JICA for the continued support towards the Government of Uganda which is not only the National Wetland Management project but to many other programmes and development activities. He called upon the project committee to review what has so far been achieved in terms of project implementation since it is in its ending stages.

The chairman briefed members on his participation of RAMSAR convention in Uruguay which had great implication to the project implementation. That RAMSAR convention drew a new 10 years strategic plan for a period between 2015 – 2025 which was made to address issues to do with wetland degradation worldwide.

He informed members that the National Wetland Management project together with other Ugandan delegates participated in the same RAMSAR convention which took place in Uruguay where several presentations were made and thereafter attended the Rice side event.

He underscored the fact that close 30% of the wetlands in South west and Eastern Uganda have been degraded which called for immediate attention if the environment is to be conserved.

He requested members to shed light on the harmonisation of other government programmes with wetland management.

The chairman briefed members and other countries participated in the rice growing scheme convention in Uruguay.

(f) The Chief Representative JICA Uganda – remarks

The Chief Representative JICA thanked the members of JCC for their support; in particular he thanked the Ministry of Water and Environment (MWE) for continued commitment to the implementation of the project.

He congratulated the chairman for the achievement so far reached looking at the project's out in its last phase and called for strong coordination between wetland conservation and other national programmes since all are vital to the people's livelihood.

The representative commended the MWE for supporting wetland Management project and participating in RAMSAR convention which is very critical to wetland management.

He informed members about the planned international conference which takes place every five years in Japan which will bring African countries and other stakeholders to discuss issues regarding environmental conservation.

He concluded his remarks by expressing his gratitude once again to the Ministry of Water and Environment for the support so far extended to the wetland management project and wished members fruitful deliberations.

MIN 3/2015/JCC8: MINUTES OF THE PREVIOUS MEETING AND FOLLOW UP ACTIONS

Minutes of the 7th JCC meeting held on 19th May 2015 were read, reviewed and confirmed as a true record of what transpired in the meeting.

Matters arising from the previous minutes:

- ❖ Members wanted to know whether the indicators of collaboration with other stakeholders and how they will be assessed.
- ❖ Members proposed to hold a high level meeting with Permanent Secretaries (PSs) of the Ministry of Agriculture and Ministry Energy in the upcoming JCC meeting in November 2015 for purposes of harmonisation of project activities.

The project Team Leader informed members that exchange of information with other stakeholders was already going on for the three projects within the Eastern part of the county.

Lessons drawn so far;

More sensitization of communities is needed and there is need for more Information, Communication and Education (ICE) strategy.

Some District leadership are not aware of many things taking place leading to lack support at Local Government level

Need to involve Resident District Commissioners (RDCs) in all project implementation processes.

Resolutions:

All District Leaders be regularly updated on project implementation.

Information, Communication and Education (ICE) be given attention including project outputs.

Talk shows using FM radio stations be used for quick and easy communication flow.

MIN 4/2015/JCC8: PRESENTATION OF THE PROGRESS REPORT III

The National Wetland Management Project Team Leader presented a progress report III which presents the status of the project as of 1st July 2015 and the way forward. The report comprised of five chapters as follows;

Chapter one was to keep the project authorities fully informed and ensure consistency of work with the overall coordination of project activities.

It also looked at the project status of 1st July 2015 and the way forward. It was in this chapter that the project was estimated at 84% as of 1st July 2015 and the remaining activities mostly those pertaining to Output 4 on community based wetland Management plans and pilot projects.

Chapter two focused on reviewing the project background which looked at project Description, Project Development Objectives and Performance Indicators, Project sites, Project Duration and Phasing and the Scope of work.

Chapter three of the report being the main body focused on the project major achievements within the past period.

Chapter four presented the key issues and challenges in implementing the project. And Chapter five was the finalizing chapter which presented the schedule of events in the subsequent period.

Matters arising from the Presentation of the Progress Report III:

Members sought clarification to be updated on the status of the project since it is in its final stage of completion.

The Team Leader responded by saying that;

- Community Wetland Management committees have been put in place
- Project activities clearly outlined but are awaiting implementation

MIN 6/2015/JCC8: OPEN FORUM

Matters arising from the Open Forum

a) Project Evaluation;

There is need to do project evaluation for members to ascertain where has the project reached, how much is remaining and what should be done.

b) Functionality of NWIS

Members inquired whether the scientific information tool has been applied, are stakeholders knowing its availability and does the National Wetland policy need to be reviewed?

c) Review of Legal documentation

Members inquired which environment laws are to be reviewed? Is it National laws or policy guidelines?

d) Digging up of River banks

Members were concerned of the farmers digging up river banks and rejecting the project programmes.

e) Number of beneficiaries,

Members inquired on who are the actual beneficiaries of the project and how many are they? What will the project change in people's livelihood?

f) Project Extension

Members inquired whether the project extension requires another budget and at what level should they approve the JCC report?

Team Leader's Responses;

- That the Wetland Management team begun by setting aside wetland management areas in Eastern Uganda in the four Districts of Manafwa, Bududa, Butaleja & Budaka.
- Some activities in Budaka District were suspended because some communities did not have enough information about the progress of the project but in other districts, the project is progressing on well.
- He also said that in Katakwi and Kumi District have been earmarked for the project activity, Manafwa river is already protected by tree planting.
- That project design and implementation Matrix shall be discussed in JICA/Ugandan dialogue meeting.
- The team leader clarified that the wetland Management policy has to work with other environmental laws and this will be done by end of November 2015.
- Members were informed that there was a plan to develop a guideline of the assessment to be used in other districts of the country which will assist district officials in developing their Community Wetland Management Plans.
- He said there is need to work together to work out the numbers of the beneficiaries from the districts where the project is being implemented.
- That the district officials should come out with major inventories on how many are benefiting from bee keeping and other related activities.
- That there is need to work out a buffer zone and members to bring together ideas on how the communities can be involved.

Resolutions;

- The project extension report be endorsed bearing in mind that the project is not operating in isolation to other stakeholders hence calling for the linkage to be enhanced
- The committees be facilitated to reach the project implementation areas especially in the four districts of Bududa, Manafwa, Butaleja and Budaka.
- The Commissioner Wetland Management Department be facilitated to reach in the field where the project is being implemented.
- JCC members be facilitated to reach in the field and see what takes place at the project implementation sites.
- A technical committee team to be set from Ministry of Agriculture, NEMA, MWE, MFEPD to guide JCC on what is feasible in as far as the project extension budget is concerned.
- Members proposed that a funding for the community known as community environmental conservation fund be put aside by the Kyoga Management zone Team leader to allow the communities around to move away from wetlands which will help them start certain financial activities to support them.

Clarification from the JICA Chief Representative:

He stated that while the recommendations of JCC are respected he will first also contact JICA head quarter to seek their views on the project termination, variations and the related budget.

MIN 6/2015/JCC8: CLOSING REMARKS

In his concluding remarks the chairperson said that he was pleased to see the project going on well and to see the number of project outputs, such as NWIS hand book, ub County Wetland Action Plans (SWAPs) & (DWAPs) district manuals and 10 years project plan copies.

The Chairperson wished members journey mercies.

SUMMARY OF ACTION POINTS

NO	ACTION POINT	ACTION BY	STATUS
1	JCC members be facilitated to reach in the field and see what takes place at the project implementation sites.	Team Leader	The JCC would take place in Mbale to allow the members to visit some of the sites in December 2015.
2	A technical committee team to be set from different stakeholders to guide JCC on what is feasible in as far as the project extension budget is concerned.	Commissioner WMD/MWE/	<p>The budget size for project extension will be eventually determined through a negotiation between the JICA HQ and the Joint Venture based on an estimated cost for implementing the proposed activities presented in the progress report. JICA will likely be able to fund those approved by JCC. However it should also be kept in mind that the budget proposal will be subject to review and modification depending on the availability of the entire budget for projects worldwide and needs and priority of JICA.</p> <p>In this context, it is recommended to discuss and consider how the JCC members should contribute to ensuring the project sustainability. Before the end of the project, it is advised to assess availability of fund for maintenance service of Arc GIS and to strategize measures for continuity of disbursement of such budget allocation.</p> <p>Once such arrangement is done, the JCC should discuss feasible arrangement for implementation of project activities. In the Year 2016, the pilot project activities will be further elaborated and identified to determine which specific components should be funded by other fund sources including community environmental conservation fund.</p> <p>The project members request further commitment of the JCC members to increase probability of sustainable wetland management intervention.</p>
	Whether the project extension requires another budget and at what level should they approve the JCC report?	Team Leader	
	Need to set aside a fund known as community environmental conservation fund to support the community financially so as to allow them move away from wetlands.	Team Leader Kyoga Water Management basin	

NO	ACTION POINT	ACTION BY	STATUS
3	Need to do project evaluation for members to ascertain where the project has reached, how much is remaining and what should be done wetland.	Team Leader/MWE	The following document was provided as an annex of the previous progress report. Further it was also delivered together with the invitation letter to the JCC meeting. <ul style="list-style-type: none"> - Annex 28 Project Monitoring Sheet.pdf
4	Members inquired on who are the actual beneficiaries of the project and how many are they? What will the project change in people's livelihood?	Team Leader/MoLG	The pilot project implementation has just commenced and been reformulated through progressive elaboration of project design. The information on beneficiaries will be compiled through further implementation of the project in collaboration with the district officers.

MINUTES OF THE 9TH JOINT COORDINATION COMMITTEE MEETING (JCC) ON THE NATIONAL WETLANDS MANAGEMENT PROJECT, HELD ON THE 9TH DECEMBER 2015 AT MT. ELGON HOTEL MBALE

JCC MEMBERS PRESENT

- | | |
|----------------------------|--|
| 1. Mr. Collins Oloya | Commissioner (WMD) |
| 2. Mr. Kyosuke Kawazumi | JICA Uganda Chief Representative |
| 3. Ms. Iyango Lucy | Assistant Commissioner (WMD) |
| 4. Ms. Eva Lwanga | Ag. Principal Hydrologist (MWE) |
| 5. Mr. Lwanga Benon | Senior Engineer (MAAIF) |
| 6. Mr. Ekadu Silas | Senior Engineer (MAAIF) |
| 7. Mr. Shunichi Murakani | JICA Uganda |
| 8. Mr. Atim Joel | Senior Inspector - MoLG |
| 9. Ms. Eunice Tumwebaze | ACC (MGLSD) |
| 10. Mr. Yasuhiko Muramatsu | Team Leader, JICA TAT |
| 11. Mr. Zenjiro Egawa | JICA – TAT |
| 12. Mrs. Muhenda Jane M | Secretary JICA /CTII Project/Recording |

MEMBERS IN-ATTENDANCE

- | | |
|-----------------------|---|
| 1. Mr. Wandera Tom | Environment officer Butaleja |
| 2. Ms. Andrea Schalla | TA-Kyoga Water/GIZ |
| 3. Mr. Taisuke Onishi | PISD/JICA |
| 4. Mr. Kabaalu Deo | Regional Wetlands Coordinator (Eastern) |

ABSENT WITH APOLOGY

- | | |
|------------------------|---|
| 1) Mr. Mafabi Paul | Director, DEA-MWE |
| 2) Ms. Imalingat Agnes | Analyst – Water Quality Mgt. Department |
| 3) Mr. Nabasa Herbert | District Support Officer (NEMA) |

AGENDA

1. Opening prayer, Adoption of Agenda and self-Introduction.
2. Opening Remarks
 - a. Chairman
 - b. JICA Representative
3. Reflection on the field trip
4. Review of Minutes of the previous meeting and follow up actions
5. Presentation of the Progress Report
6. Open forum
7. Closing Remarks and Adjournment of the meeting

MIN 1/2015/JCC9: OPENING PRAYER, SELF INTRODUCTIONS AND ADOPTION OF THE AGENDA

The Chairman called the meeting to order at 10:00a.m., and welcomed all the members to the 9th Joint Coordination meeting amidst their busy schedule.

He requested a volunteer to lead the opening prayer, which was followed by self-introductions by the members.

The Agenda was then adopted with amendments.

MIN 2/2015/JCC9: OPENING REMARKS

(g) Chairperson's Opening Remarks

The Chairman welcomed the members to the meeting; he then thanked members for making time to come for the meeting and also for keeping time. He acknowledged the presence of the JICA Chief Representative and representatives from different ministries, departments, Development Partners and agencies.; he then invited Mr. Kyosuke Kawazumi, JICA Chief Representative to make his opening remarks.

(h) The Chief Representative JICA Uganda – remarks

In his remarks the Chief Representative JICA thanked the Chairman for accepting to chair the meeting; and noted JICA's pleasure in being part. He also thanked JCC members for their participation and was appreciative of their contribution towards the success of the project.

He noted the great opportunity provided to members through the field trip to get on ground experience and knowledge about the project. He thanked the project team for arranging the field trip. He then observed that the project had only one year to the close, fortunately there are outputs to show. He further informed the members that the achievement of the project would go a long way in improving and sustaining the relationship with other regions of the country.

Regarding the sustainability of the project, there was need for various actions including; continuation of budget allocations, for sustainability to be realised there was need to ensure that the project contributes to the sustainability of livelihoods, he emphasized the need for JCC members to ensure that there is impact in the different regions where the project is being implemented. He concluded his remarks by wishing all fruitful deliberations.

The following are key points to note from the JICA Chief Representative's remarks;

- 1) The project will close at the end of the year 2016 and there will be no extension. JICA recognizes the need for project sustainability and this requires various measures and interventions. ;.
- 2) He was delighted to know that the budget for the software to operate GIS/NWIS was earmarked last year and emphasized the need for this to continue even after the project completion.
- 3) The department has made important achievements including 1) preparation of Framework Management plans; and 2) support of communities in implementing pilot activities, among others. These activities should not be project specific support, but, they should be Sustained and replicated as planned; with commitment from the government of Uganda.

MIN 3/2015/JCC9: REFLECTION ON THE FIELD TRIP

Two field sites were selected and visited during the field exercise; the first in Butaleja Local Government and the second in Sironko Local Government.

i. Butaleja

The main activity here was fish ponds and boundary demarcation. The meeting was informed that before the project intervention Farmers were being chased back and forth because of encroachment. But, with the project, there is alternatives have been proposed to advert, while ensuring livelihood at the same time.

In summary the following was noted about the site visited in Butaleja District Local Government:

- The need to monitor the quality of water, and also solicit for technical support from the production department of the Local government. It was further advised that the community of Butaleja should work as a group as this would enhance cohesion and could be assisted

easily when together. It was also recognized that there was some improvement on the perception of the community members.

- The location of the ponds close to the river was noted; and the question on viability arose. In addition, the question as to the number of fish species and method of selection was raised given the location of the site downstream, its being flood prone. Moreover, besides floods sediments and other contaminants are carried downstream, this may impact negatively on the pilot activity; and needed to be addressed through a catchment based management approach.
- A member noted that gender and cultural aspects of fish consumption needed to be factored in order to ensure that there is no exclusion. In response, a member went on to say that, since there is need for sharing the fish, farming should be handled as purely commercial as possible. And that cat fish is consumed locally, and so the market is available. An option of studying more about tilapia was suggested.
- In response, a member went on to say that, since there is need for sharing the fish, farming should be handled as purely commercial as possible. In addition, cat fish is a daily menu that is widely acceptable hence there is ready market. A proposal was also made to carry out studies about tilapia.

Other comments centred around the viability of and replication of the project interventions, community involvement, the need for monitoring interventions, the need to factor in budgetary viability, communicating the project (e.g. sign posts at pilot project sites) and of the project (A clear communication strategy should be developed), the need for the involvement of all relevant departments in the respective Local Governments,

ii. Sironko

A member noted that the site in Sironko was a converted wetland, with visible streams, and was informed that the streams became larger during rainy seasons. It was observed that water was being lifted from different points to irrigate crops at this site and there was a plan to expand this system. However, caution was given to ensure due diligence throughout the process. Furthermore consideration of both upstream and downstream users was recommended for realisation of good results. A suggestion was made that the officials need to work closely with Ministry of Water and Environment (including the Directorate of Water Resources Management; users were advised to apply for permits, a requirement that fits well with the catchment zone approach.

Other observations included the need to maintain the river bank protection zone, ensure participatory bottom up approach in implementation, and encourage monitoring and evaluation of interventions at community, Local Government and national levels. Women were not visible during the field visit and recommendation made to actively involve them.

Before ending the field trip at this site, the Regional Wetland Coordinator provided the following information;

- Different types of wetlands exist in the project area, requiring unique interventions. For practical management at the Sironko Site, he proposed a surrogate indicator, instead of water level gauging, such as estimation of water use on the basis of frequency of operation, area to be irrigated, etc.
- Community management plans have been developed in all pilot site intervention areas, and they inform the type of pilot project. Implementation of the project is being jointly done by the Ministry of Water and JICA Consultants, with financial support from JICA.
- Nalulugu Wetland Management Association was set up and it is in the process of developing a constitution to help the association move forward. In addition, community members agreed to leave 30m as a protection zone. Each pilot project is unique, but choice is guided by community inputs during the consultation and mobilisation

processes.

MIN 4/2015/JCC9: MINUTES OF THE PREVIOUS MEETING AND FOLLOW UP ACTIONS

Minutes of the 8th JCC meeting held on 21st July 2015 were read, reviewed and confirmed as a true record of what transpired in the meeting.

Matters arising from the previous minutes:

1. On the 9th JCC meeting to be held in December 2015, the members agreed that this had been done in a timely and effective manner.
2. The project team leader informed the members that there was need for deliberation on the sustainability of the project.
3. The team leader went ahead to say that the budget of the activities for the project extension period would be likely be funded by JICA head office and, thus, the focus of the deliberations needed to centre on continuity of the project afterlife period.
4. In regard to enhancing sustainability during the 2016-2017, the meeting was informed that a plan was in place to ensure completion of actives. Local government funds from PRDP, and funds from the Wealth Creation Fund provided opportunities to further harness project implementation must be taken up, this is because the funds provided at national level are not enough. Technical officers at local government level should factor this into the day to day activities. It's a lesson learnt from the eastern Uganda and part of southern Uganda COB WEB projects. The member went on to say that if activity budgets were factored into the district plans then sustainability would be achieved.
5. As for the scale of beneficiaries, the project team leader informed the members that the project will benefit the officers engaged at the districts; it will also in the long run benefit 560 direct beneficiaries in the wetlands.

In case of Bududa, Sironko the project was designed to minimise soil erosion, which would benefit the downstream wetland users such as fishing communities in the Bisina and Opeta Lake.

One member wanted to know about the beneficiaries of the project and the impact so far. He inquired about how many households are benefiting, what the number of beneficiaries is and what would be the impact on beneficiaries.

The Chairperson responded that the district officials should know the number of households or members to benefit indirectly and directly, and this should be in terms of social economics, cultural and Environmental.

As for the estimation of the beneficiaries and the economic impact of the pilot project, it was agreed that the statistics available at UBOS should be used as far as possible. The team leader informed to the members that the economic and financial appraisal of the livelihood components would be complete by April 2016.

It was emphasized that, in order for sustainability to take place, the community Development Officers, Fisheries Department, the district planners must be on board. The departments at the district thereby will ensure sustainability by taking on the project to the next level, which was to say that each department was to have their role to play

MIN 5/2015/JCC9: PRESENTATION OF THE PROGRESS REPORT

The National Wetland Management Project Team Leader presented a progress report V which was prepared to present the project status of the project as of 30th November 2015 and the way forward until December 2016. The report comprised of five chapters as follows;

Chapter one gave an over view of the project progress which were presented by the team leader as follows;

In the four districts of Kibuku, Manafwa, Palisa and Sironko constitutions of the community wetland management committees are in their last development process.

He went ahead to inform the members that in Bududa, Butaleja, Budaka, Kapchorwa and Katakwi community wetland management committees had proceeded to develop their constitutions

Wetland demarcations had been carried out at the pilot project sites in Bududa, Manafwa, Butaleja, Palisa, Budaka, Kibuku, Kapchorwa, Sironko and Katakwi and they had come up with memorandum of understandings between the communities and pertinent districts which are in their final stage.

Chapter two focused on the project description, Project development objectives and performance indicators, Project sites, Project duration, phasing and Scope of work, Chapter three of the report being the main body focused on the project major achievements within the past period.

Chapter three presented major achievements in the period; Support the communities in implementing the pilot projects, Overview of the status, implementation status, development of wetland management manual, draft model of conservation and wise use of wetlands, Wetland manuals, development of decision support systems and counterpart training in Japan.

Chapter four, presented key issues and challenges; Framework management plan implementation committee, Pilot project review meeting, plan of activities in the year 2016 and Modification of PDM.

Schedule of events in the subsequent period being the fifth chapter highlighted the following;- Overview of the activities in the subsequent period, Project reports, key deliverables and Mobilisation plan.

Matters arising from the Presentation of the Progress Report III:

One of the members needed clarification on whether the Joint Coordination Committee members should go ahead with the project activities as prioritised next year or scale them down given the remaining six months.

Another member raised a question on how the NWIS which is the central information system of the Wetland Department for decision making, would be made functional by the end of the project period.

Furthermore, another question was raised on whether other WMD Regional Wetland Coordinators should be brought on board now or be mobilised through the Trainer of Trainees approach.

The Team Leader noted that the plan of activities had been ambitious because the scope of activities is broad, however the remaining time can only be used to windup activities and ensure that there were structures for handover and continuity of the project after close. He further clarified that there would be one week Nationwide training for each region. This would take place in Mbale, at which regional coordinators will be mobilized to participate.

The Assistant commissioner, Wetlands, also brought to the attention of the meeting the need to appreciate the number of commitments of the District officers on the project, noting that the same officers had to participate and deliver on other projects such as PRDP and NUSAF, notwithstanding this, substantial progress has been made. It was also noted that it was the responsibility of the Regional coordinators to follow up on the district officers but should not be a burden on the Team leader's side.

MIN 6/2015/JCC9: OPEN FORUM

Matters arising from the Open Forum

g) **Project ;**

One member wanted to understand if the Regional Coordinator were staying on until the end of project as a way of ensuring sustainability.

h) Functionality of NWIS

- Members inquired whether the scientific information tool is accessible to everyone or whether it was being hosted at a central point. In response the meeting was informed that the NWIS is accessible through internet but has not yet been devolved to project districts.

i) Frame work management implementation committees

Members sought clarification on the roles and responsibilities of the committees in the implementation of the project. Do they have the same members and how would they be financially supported for the project sustainability?

In response, one of the members replied that the committees are facilitated by different projects; however issues of sustainability have to be further discussed and clarified.

The Regional Wetlands Coordinator-Eastern summarised the roles and responsibilities of the committees, the framework and sustainability. He noted that because the wetlands systems were interconnected because wetlands do not follow into a specific district; they were put into two zones of Doho-Namatala comprising of 8 districts and Awoja wetland system comprising of 12 districts.

In this respect management plans cover specific wetland system and are in line with the water management catchment plans, inter district coordination committees exists to oversee and spearhead the implementation of the plans.

j) Institutional Arrangements

The Chairman informed members that there is need for harmonisation to ensure that there was no duplication and creating of many institutions to avoid same officers sitting on all the different committees. There is need to hold a meeting to harmonise the working of the committees members for Catchment management zones and those of wetland Framework Plans.

k) Harmonisation of activities

There was need to understand whether activities of irrigation being undertaken by Ministry of water and Environment are harmonised under the wetland management project. In response members were informed that this was being done by both the National Wetlands Management Project and the Catchment Management Zone.

l) Inclusion of Local Governments in the projects meetings

The representative from the Ministry of Local Government thanked the members for the deliberations and good work done. He went on to say that in order for his ministry to ensure the project implementation there is need for their involvement in the meetings for purposes of following up matters resolved with concerned Chief Administrative Officers.

Resolutions;

- Local Government representatives to be involved in the project committee meetings for the proper implementation of the project and easy follow-up.
- Fully operationalise the NWIS before the end of the project at Local Govern project level and to key stakeholders. There is need to hold meetings to harmonise project activities to avoid duplication and ensure sustainability of the project.
- The Catchment Management Committee to convene a meeting to include Ministries of Agriculture Animal Industry and Fisheries, Local Government, Gender, Labour and Social Welfare and Water and Environment for better coordination and collaboration.

- Disseminate the Resource user guidelines, manuals and Hand books to the different stakeholders.

MIN 7/2015/JCC9: CLOSING REMARKS

In his concluding remarks the Chairman noted the project achievements to date and thanked the JCC members for their very valuable inputs throughout the project life to date, and also during the meeting.

He went ahead to thank the Government of Japan for identifying, planning and implementing the project. He also requested if funds are available this should be up scaled to the rest of the regions of the country.

He ended by wishing all members journey mercies, Merry Christmas and a Prosperous New Year 2016.

SUMMARY OF ACTION POINTS

NO.	ACTION POINT	ACTION BY	REMARKS
1)	Involve Local Government representatives in future project meetings (JCC)	NWMP Secretariat	To be effected during JCC meetings
	Fully operationalise the NWIS	Team Leader NWMP and WMD Team	The ecological monitoring plans of the pilot activities will utilize the linkage between the districts and the central office via the regional coordinator. The project will support them to upload the information of the protection zone boundaries and the ecological monitoring.
	Hold Harmonization meeting with the Kyoga Catchment Management Zone – liaise with the Catchment Management Zone leader. Involve relevant stakeholders	Team Leader NWMP and RWC Eastern	
4)	Finalise, prepare and Disseminate ear marked Resource user guidelines, manuals and Hand books to the different stakeholders.	Team Leader NWMP, RWC Eastern and WMD Head Office Team	Ongoing process (the different materials have been identified) The activities in the year 2016 will include finalization of the relevant manuals and guidelines to be published.
	Follow-up with project Local governments to ensure integration of the project into local planning and relevant running and new projects	Team Leader NWMP and RWC Eastern	Take advantage of the planning and budgeting cycles
6)	Capacity strengthening of the other three Regional coordinators on wetland management	Team Leader	The Work Plan of the year 2016 will integrate the program to mobilize the regional coordinators in convening the nation-wide training.

DRAFT MINUTES OF THE 10TH JOINT COORDINATION COMMITTEE MEETING (JCC) ON THE NATIONAL WETLANDS MANAGEMENT PROJECT, HELD ON THE 11TH APRIL 2016 AT FAIR WAY HOTEL

JCC MEMBERS PRESENT

- | | |
|----------------------------|--|
| 1. Mr. Paul Mafabi | DEA, MWE |
| 2. Mr. Collins Oloya | Commissioner (WMD) |
| 3. Mr. Kyosuke Kawazumi | JICA Uganda Chief Representative |
| 4. Ms. Eva Lwanga | Ag. Principal Hydrologist (MWE) |
| 5. Mr. Shunichi Murakani | JICA Uganda |
| 6. Ms. Eunice Tumwebaze | ACC (MGLSD) |
| 7. Mr. Yasuhiko Muramatsu | Team Leader, JICA TAT |
| 8. Mr. Taigo Sasaki | JICA HQ |
| 9. Mr. Nabasa Herbert | District Support Officer (NEMA) |
| 10. Mr. Ronald Kato Kayizi | AC-WFAP |
| 11. Mrs. Muhenda Jane M | Secretary JICA /CTII Project/Recording |

MEMBERS IN-ATTENDANCE

- | | |
|-----------------------------|---|
| 1. Mr. Kabaalu Deo | Regional Wetlands Coordinator (Eastern) |
| 2. Mr. Barugahare Vincent C | Principal Wetland Officer |
| 3. Mr. Mabiya Joshua | CAO |
| 4. Ms. Mugoya Sonny | C/P DWMC – Eastern |
| 5. Mr. Toshimasa Kobayashi | Team Leader –PISD |

ABSENT WITH APOLOGY

- | | |
|--------------------|------------------------------|
| 1) Ms. Iyango Lucy | Assistant Commissioner (WMD) |
| 2) Mr. Ekadu Silas | Senior Engineer (MAAIF) |

AGENDA

1. Opening prayer, Adoption of Agenda and self-Introduction.
2. Opening Remarks
 - a. Chairman
 - b. JICA Representative
3. Review of Minutes of the previous meeting and follow up actions
4. Presentation of the Work Plan
5. Open forum
6. Closing Remarks and Adjournment of the meeting

MIN 1/2016/JCC10: OPENING PRAYER, SELF INTRODUCTIONS AND ADOPTION OF THE AGENDA

The Chairman called the meeting to order at 10:30a.m., and welcomed all the members to the 10th Joint Coordination meeting amidst their busy schedule.

He then requested Ms. Jane to lead in the opening prayer, which was followed by self-introductions by all the members.

The Agenda of the day was adopted without any amendments.

MIN 2/2016/JCC10: OPENING REMARKS

(i) Chairperson's Opening Remarks

The Chairman welcomed the members to the meeting; and thanked them for finding time to come for the meeting and also for keeping time. He acknowledged the presence of the JICA Chief Representative and other representatives from different ministries, departments, Development Partners and agencies.

The chairman went ahead and informed members that this was a routine meeting of the committee to continuously review the project and ascertain to what extent they have achieved the project objectives and also check for any bottlenecks. He further said that there is need to consider the issue of sustainability and also whether the project would be extended.

Members were also informed the chairman that as per their own assessment the project has been a success.

He further informed members that there were still structures coming up, some of which were approved and others with no approvals. He continued by saying that it was a government's responsibility to put systems in place to protect the wetlands so that the resource is not depleted and more so this was a responsibility of all citizens to protect the natural resources.

He then invited Mr. Kyosuke Kawazumi, JICA Chief Representative to make his opening remarks.

(j) The Chief Representative JICA Uganda – remarks

In his opening remarks the Chief Representative JICA informed members that it was a great pleasure and privilege for him to participate in that day's Joint Coordination Committee meeting which constituted the project milestone of the National Wetlands Management Project.

On behalf of JICA he expressed their appreciation to all the JCC members and other stakeholders for the contribution made towards the successful implementation of the National Wetlands Management Project. He also thanked all the JCC members for their tireless efforts whose tangible outcomes have been achieved.

Members were informed that we were in the quite important stage towards the December 2016, the period in which the project will be ending. And since there would be no further extension of the project, members were urged to work harder continuously so as to make the achievements more consolidated and sustainable since both efforts are the key for the successful wrap up of the project.

With an emphasis on sustainability, the Chief Representative requested the ministry of Water and Environment to consider continuous supports to collaborative activities beyond the project period.

As for the current community activities, it was recognised that financial health would-be taken into consideration to the formulated plan for sustainable management. However, even in the situation, the community might be faced with challenges technically and financially. In such situation monitoring and supports from the government are key factors for long term success of the activities and was hopeful that the government would undertake necessary measures continuously to the communities even after the project period.

Backing to the when the project was formulated, he informed members that the project was initiated with the assumption that Ugandan Government would have full responsibilities to utilize and make the best use of outcome from the project for the development of wetland management.

In such a case JICA believed the government's further ownership would make the project's out come more prominent and sustainable.

He also appreciated if the members would immediately start considering how to continue with the current activities including the possibility of utilizing funds even from other organisations for the project's sustainability.

On behalf of JICA the Chief Representative concluded by reassuring members their commitment to playing their part in the execution of the project and look forward to continuous collaboration with the Ministry of Water and Environment and other stakeholders for the remaining period. Once again he thanked the Director and the Ministry of Water and Environment for hosting the 10th JCC meeting and expressed his high appreciation to all the day's participants by wishing them fruitful deliberations.

The following are key points to note from the JICA Chief Representative's remarks;

- 4) The project will be closing come December this year 2016 and there would-be no further extension.
- 5) The financial health taken to the formulated plan for sustainable management.
- 6) Ministry of Water and Environment to consider continuous supports to collaborative activities beyond the project period.
- 7) For challenges that might face the communities in the project sustainability, he was hopeful that the government would take necessary continuous measures to the communities even after the project period.
- 8) Members to immediately start considering how to continue with the project current activities including the possibility of utilizing the funds even from other organisations for sustainability.

Matters arising from the JICA Chief Representative

Issues of sustainability: The chairman informed members that the ministry was sourcing for funds for the restoration of all wetlands and to that effect a proposal had been submitted with support from UNDP.

He also went ahead to say that the ministry was preparing a National wetlands restoration program which is still at its conceptual stage with support from UNEP which would help to re-instate the wetlands to their original state.

MIN 3/2015/JCC10: MINUTES OF THE PREVIOUS MEETING AND FOLLOW UP ACTIONS

Minutes of the 9th JCC meeting held on 10th December 2015 were read, reviewed and confirmed as a true record of what transpired in the meeting.

MIN 4/2015/JCC10: PRESENTATION OF THE WORK PLAN

The National Wetland Management Project Team Leader presented a Work Plan which comprised of two chapters as follows;

Chapter one gave the project Background, Description, Project development objectives and performance indicators, Project sites, Project duration, phasing and Scope of work,

Chapter two focused on the overview of the activities in the subsequent period, Project reports and key deliverables and lastly the major Mobilisation Plan.

Matters arising from the Presentation of the Work Plan:

Encroachment on the demarcated areas:

- Members inquired why the community members had entered the wetland boundaries which had been demarcated. The regional coordinator responded that 1) the community members encroached in some districts in the dry seasons; however, 2) the community members are continuously being sensitised about respecting the bylaws.

- The chairperson emphasised on gazetting all the wetland areas, community involvement should be reassessed and MOUs be signed.
- One of the participants wanted to know when would the National training would take place and he was of the view that it should take place immediately in order to ensure all the district are covered.
- Members recommended that action points be shared with the MGSLD and involve CDOs at every stage to help in easy monitoring of project activities.

Publication of Project manuals,

One of the participants wanted to be clarified on how the various project guidelines and Manuals are going to be utilized. In response one member clarified that they are to be used at different levels by various stakeholders. Hence it is the role of the department to maintain standards and since this is a model project they can be used as a tool even in other districts.

MIN 5/2015/JCC10: OPEN FORUM

Matters arising from the Open Forum

One member suggested that there is need to interact with DLGs to ensure that they capture activities in their plans since the project is coming to an end.

m) Ecological Monitoring and NWIS

The team leader informed members that the ecological monitoring plan was to be uploaded and fed into the NWIS and that process would be discussed on what kind of data to be fed into the NWIS.

n) Harmonisation Issues

On the issue of policy harmonisation the chairperson informed members that it is a process where there is need to identify the different issues, do an analysis first, of the differences and similarities between issues and finally harmonise.

The chairperson emphasised that the key stakeholders should form a committee to identify issues to be harmonised.

o) Regional Symposium

Members were informed that there was a proposal to hold a symposium in October or beginning of November and the plan was to invite stakeholders from different countries in order to deliberate upon the successes, challenges and most importantly share lessons learnt during the implementation of the National Wetlands Management Project.

On the above issue the chairperson recommended that the project Team Leader together with the MWE prepare a concept.

MIN 6/2015/JCC10: CLOSING REMARKS

In his concluding remarks the Chairman noted that there was need to assess the project achievements to date and this was tasked to the Team Leader working hand in hand with the WMD. This was also to prepare the JCC members for project evaluation.

He finally thanked the JCC members and in a special way the Government of Japan through JICA for their very valuable inputs throughout the project life to date, and also during the meeting.

SUMMARY OF ACTION POINTS

NO.	ACTION POINT	ACTION BY	REMARKS
7)	Members should take time and identify issues from different stakeholders and organise forums for harmonisation	NWMP Secretariat	Stakeholders meetings have been convened under a contract. A guideline was finalized.
8)	There need to ensure that demarcations are clearly gazetted, Community involvement should be reassessed and MOUs be signed	Team Leader NWMP and WMD Team	MOUs were developed and assembled.
9)	There is need to interact with DLGs to ensure that they capture activities in their plans since the project is coming to an end.	Team Leader NWMP and RWC Eastern	
10)	Preparation of a concept paper on the symposium and share it with the JCC members in order to have an input	Team Leader/MWE	The concept paper was prepared. The symposium was successfully organized on 4 th and 5 th October 2016 with the participation of the representatives of the Ramsar secretariat among others.
11)	There is a need to ensure that all districts sign all the MOUs, demarcate all the protected zones, while emphasizing community involvement.	RWC Eastern, DLGs, CDOs, WMD	MOUs were developed and assembled.

