

A. GENERAL PROJECT INFORMATION	
Country	Kenya
Region	ESA
Grant Title	Food-IAP: Establishment of the Upper Tana Nairobi Water Fund (UTNWF)
Associated GEF Programme or Framework (FSP/MSP/IP/EA)	FSP
Grant Type (select one from GEF Trust Fund, LDCF, SCCF)	GEF
Reference numbers	
PIR Implementation Status (1 st , 2 nd , 3 rd , 4 th , Final)	4th
GEF ID Number	9139
IFAD Grant Agreement	2000001524
IFAD ID Number (LGS)	9070
GEF Focal Area and Programme	
GEF Focal Area¹	Multi focal area
GEF OP or SP²	Food Security for Sub Saharan Africa IAP
Critical milestones	
GEF CEO endorsement of FSP and approval of MSP	20 July 2016
Actual Agency (IFAD) approval date	26 July 2016
Actual implementation start date	06 October 2016
Last supervision mission date	June 28 – July 9, 2021
Expected/actual Mid-Term Evaluation date	Actual: 19-28 August 2019
Expected Terminal Evaluation date	Expected March 2022
Expected project completion date	31 December 2021
Expected financial closure date (6 months after effective completion)	30 June 2022
Grant Financing (USD)	
GEF Project Preparation Grant (PPG) amount	137,615
GEF grant amount	7,201,835
Total GEF financing (PPG + Grant amount)	7,339,450
GEF grant disbursed (as at 30 June of FY)	6,413,795
GEF grant spent (as at 30 June of FY)	6,674,083
Proposed co-financing (as at CEO Endorsement)	20,400,000
Actual co-financing secured (may be different from co-financing proposed at CEO endorsement)	25,944,677
Actual co-financing disbursed (as at 30 June of FY)	25,944,677

¹ Select one among the following: Biodiversity; Climate Change; Land Degradation; International Waters; Chemicals and Waste; Multifocal area; Impact Programs.

² Operational Priority or Strategic Priority.

Actual co-financing spent (as at 30 June of FY)	25,944,677
Total project amount (total GEF grant + total co-financing secured)	68,389,780
Total project amount disbursed (disbursed: GEF grant + co-financing secured as at 30 June of FY)	32,358,472
Total amount spent (spent: GEF grant + co-financing secured as at 30 June of FY)	32,618,760
First disbursement date	12 December 2016
Reporting tools used for the reporting period	
List of reports³	<p>Annual progress reports (APR), June 2021 Project implementation reports (PIR), 1st, 2nd. and 3rd Budget realignment request, May 2021 Procurement Plan FY2020/21 Annual Workplan and Budget FY2020/21 Endowment recapitalization request, Nov 2020 UTNWF Annual Work Plan and Budget (AWPB), 2017/18, 2018/19, 2019/20 IFAD Supervision Mission Reports - March 2018, March 2019, Sept 2020 IFAD Supervision Aide Memoires - August 2016, February 2018, March 2019, Sept 2020 UTNWF Mid Term Review Mission Report and Aide Memoire, August 2019 UTNWF Project Implementation Manual (PIM) GEF Project Baseline Survey Report (MPAT), 2017 UTNWF Land Health Baseline Report (LDSF) UTNWF PDR – Volume I (Main report) UTNWF PDR Volume II (Appendices)</p>
Tracking tools⁴	<p>Multi-dimension Poverty Assessment Tool (MPAT) Land Degradation Surveillance Framework (LDSF) FAO Ex-Ante Carbon Balance Tool River Gauging Stations (Hobos, Telemetry, Greenspan MP47, handheld turbidimeters, etc.) Short Message Service (SMS) Mobile platform Biological Condition Gradient (BCG) Baseline Report Gender and Poverty Targeting Strategy Document District Health Information System (DHIS2) Project Log Frame and Results Matrix IFAD's Operations and Results Management System (ORMS) Farm Specific Action Plans Global Positioning System (GPS) Production and productivity tracking tool Level of Farm Engagement Tool Farm Plans</p>
Project contact	
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³ Please list any relevant documentation being used as a reference to this report – if applicable.

⁴ Please list and attached to this report relevant tracking tool(s) – if applicable.

B. CONTRIBUTIONS TO INNOVATION and LESSONS LEARNED <i>Please briefly illustrate current and emerging initiatives – if applicable⁵</i>	
<p>1. Information on progress, challenge, and outcomes regarding engagement of stakeholders in the projects/program based on the description included in the Stakeholders Engagement Plan or equivalent documentation submitted at CEO Endorsement/Approval</p>	<p>Ministry of Environment and Forestry (MEF) – leadership and participation of MEF, through the PSC continued. PSC held its 5th meeting in Dec 2020 and a field-monitoring visit in January 2021. Ministry technical officers and PSC members participated in the annual supervision Missions in September 2020 and June 2021. A key challenge was the limitation of in-person meetings, travel and field activities restriction due to Covid-19 that affected enhanced participation. However, the project adapted to virtual platforms for meetings and workshops while facilitating lean teams for in-person and field activities. This ensured continuity of project activities.</p> <p>Trust governance teams – the board of trustees and board of management held their meetings regularly and continued to provide leadership, networking with private sector, fundraising, and support to transition preparations. The Fund held its 4th AGM in December 2020 where Trustees and directors participated as per the Trust governing statute. A transition roadmap was defined and approved that has guided the recruitment of an Interim Executive Director, preparation of Trust policies and procedures Manuals, and recruitment of staff. The Trust is ready for transition to an independent entity from September 1, 2021.</p> <p>County governments and other agencies – engagement with the four counties of Murang’a, Nyeri, Laikipia, and Nyandarua continued, and two additional MOUs (Nyandarua and Laikipia) were signed. The Water fund now has structured partnerships with the four counties providing leveraged staff capacity and funds for conservation activities. In addition, partnership with Water Resources Authority on water quality and quantity continued and successfully carried out the low and high season river flows monitoring building on the data for project monitoring and support to decision making.</p> <p>Implementation partnerships – joint planning, implementation, and monitoring continued through regular quarterly County Advisory Committee (CAC), monthly Focal Area Teams (FATs), project and partners quarterly progress reviews and planning workshops platforms. This was adaptively facilitated through virtual platforms, limited in-person sessions and site visits. This enabled the project to keep track of the planned activities, implementation progress and address constraints and challenges that could derail the project activities as Covid-19 restrictions and guidelines continued to evolve during the year.</p> <p>Upstream stakeholders (farmers and other actors) – The project continued with farmer engagements and contracted service providers, including county extension staff throughout the year. This involved farmers’ mobilization and sensitization on their roles and responsibilities as well as the opportunities and support provided by the project. In turn, the annual workplan for the year was fully implemented and the farmers reached increased to 38,923 and 222 institutions including schools and places of worship. The area brought under sustainable land management increased to 72,890 hectares.</p> <p>Data users - The project finalized the consolidation and validation of water quality and quantity data from 33 river stations and 6 weather stations and established one database anchored on the DHIS2 tool. The database is fully functional and is supporting WRA and NCWSC as primary users of the project data to inform their operations, policies, and decision-making with real-time data. Key stakeholders were trained on data collection using a data capture tool, analysis, and visualization. Moreover, affiliated students and researchers applying the water fund data were trained on how to filter and download data from the database.</p> <p>Other stakeholders – Project, through various platforms, continued to engage, share and learn with and from others through:</p> <p>i) Information centers at national and county levels - The project continued to develop the county and national level information center domiciled at Sagana field office (https://bit.ly/3aLuZeO) and NMK (https://bit.ly/3cWMMk5l), respectively. The</p>

	<p>information centers have been populated with a wide range of information targeting different stakeholders and audiences. At the NMK, a large outdoor screen has been mounted and already displaying the work and achievement of the project to thousands of people visiting the Museums every month.</p> <p>ii) Pre-world water day virtual event - The UTNWF hosted staff, partners, corporates, and other stakeholders on 18th March 2021. The event was graced by the Principal Secretary (PS) ME&F, Dr. Chris Kiptoo, president of the UTNWF Trust, Mr. Eddy Njoroge, the governor for Nyandarua H.E. Hon Francis Kimemia, CECMs from Nyandarua and Murang'a county governments, and other leaders from different corporates. Participants were urged to be ambassadors of the UTNWF Trust and actively mobilize resources to fully capitalize the endowment fund. Call recording https://tnc.box.com/s/gx7dp1rf2j1xtv5hws7hf8spguroy9w</p> <p>iii) World Water Week Celebrations hosted by the International Fund for Agriculture Development (IFAD), Stockholm International Water Institute (SIWI), and the World Agroforestry Center (ICRAF) were held virtually from the 24th to the 28th of August 2020. The theme for the event was "Building Climate Resilience and Incentivizing African farmers." The Director for Water Funds in Africa, Mr. Fred Kihara made a presentation to a global audience on "The impact of our work in Tana to farmers."</p> <p>iv) International forum by the African Water Funds Network. In May 2021, the WF president, Mr. Eddy Njoroge shared lessons from the Upper Tana Nairobi Water Fund on how leadership can influence the development and success of Water Funds in Africa.</p> <p>v) The project, through global TNC support, held a meeting to explore the use of satellite imagery to monitor water quality in large water bodies. Images showing the status of water quality in Thika dam in terms of turbidity and chlorophyll levels were presented in March 2021. This innovative approach shows the trends in water quality as impacted by land use/cover and extreme events e.g., floods or landslides. The project received additional support from TNC to model sediment yield using computational algorithms. The results will be used to update the RIOS and SWAT model of the upper Tana watershed. The kickoff meeting for this activity was held on 24th March 2021.</p> <p>vi) Rivers in Kenya's economy: UTNWF participated in a virtual workshop organized by the World Wildlife Fund on 24th November 2020 to review a draft report on the roles of rivers in the economy of Kenya. The report features the lessons and research conducted by the project in the upper Tana River and can be accessed in the link https://bit.ly/3xFumME.</p> <p>vii) Regional Resource Hub: The UTNWF participated in the launch of the knowledge-sharing platform for 24 African countries. The hub compiles and analyses relevant data and provides information to support field interventions and policy dialogues for fair and effective management and governance of protected and conserved areas.</p> <p>viii) Horn of Africa and Sahel virtual knowledge share fair that was held 9th December 2020 – the objective was to promote innovations to build resilience against climate shocks in project areas and countries. The workshop was organized by IGAD, CILSSO, and FAO.</p> <p>ix) African Union (AU) webinar on livelihoods in the context on COVID-19: A workshop organized by AU, FAO, IFAD, and World Bank was held on 22nd September 2020 and brought policymakers, stakeholders, and commodity value chain actors to</p>
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⁵ If necessary, please expand to 1 or 2 additional pages.

	<p>draw their attention to the plight of rural livelihoods and the need to target interventions to the rural areas and to share experiences on measures/strategies put in place to mitigate the impacts of COVID-19 on rural livelihoods.</p> <p>x) UTNWF participated in a stakeholder workshop organized by the FAO on 16th September 2020 to develop an e-learning course on Farmer Field Schools (FFS). The course is designed for project formulators, field staff, and FFS specialists to support the understanding and formulation of quality FFS programs.</p> <p>xi) GEF– IAP Resilient Food Systems (RFS) country projects learning and exchange webinar: This was held on 9th July 2020 as part of the annual workshops to allow country projects and RFS partners to exchange information and learn more about project activities.</p> <p>xii) TNC’s Global Source Water Protection: The UTNWF M&E and Knowledge management team held a virtual session with members of TNC’s source water protection team to further refine the draft objectives for the Trust. During this session, improvements were made to the biodiversity indicators. These objectives UTNWF held another meeting on 9th December 2020 with TNC’s Global Source Water Protection Team to discuss the upper Tana Rivers flow and sediment data and to plan for future monitoring and evaluation needs.</p> <p>xiii) Africa Source Water Protection Virtual Seminar: GoK, TNC, and Nairobi City Water and Sewerage Company hosted a virtual Africa Source Water Protection (SWP) seminar on 21 September 2020. The objectives were to bring together key stakeholders in the water sector to discuss plans for the continent’s water security; suggest ways to effectively engage in the proceedings during the 9th World Water Forum (WWF), and discuss ways to communicate to government, the private sector, and civil society the importance of their participation in the continent’s water agenda and mobilize their action.</p>
<p>2. Information on progress on gender-responsive measures and any intermediate gender result areas as documented at CEO Endorsement/Approval including gender-sensitive indicators contained in the project results framework or gender action plan or equivalent</p>	<p>Gender mainstreaming - During the year, implementation of the gender inclusion and pro-poor targeting strategy continued. This was actioned through promotion of rainwater harvesting, agroforestry, and drip kits technologies as well as extending an additional 50% subsidy on all cost-shared conservation technologies and materials (including drip kits and water pan liners) to ensure women-headed households and elderly persons aged 60 years and above access and afford the project support. To effectively mainstream gender responsiveness, 14 UTNWF staff (8 W, 6M) were taken through a two-day training on gender in October and November 2020. A Gender Action Plan was developed that guides the implementation of the gender mainstreaming and pro-poor targeting strategy. In addition, the project adopted elaborate and deliberate extension methodology such as farmer field school and farmer to farmer extension methodology to reach more women, vulnerable, and the youth. The vulnerable in the project are people living with disabilities (PWD). The project works with youth and female technology promoters to reach more youth farmers through a “peer-to-peer” learning and mobilization strategy. Cumulatively the project has trained 149 women farmers, 15 youth technology promoters, and 57 PWD through FFS extension approach. This has built a residual technical capacity within the communities and households served by the project. As a result, 15, 207 women and 6,966 youth are directly benefiting from the project activities.</p> <p>Resourcing the mainstreaming agenda - The project provided alignment in budgets to facilitate gender action plan implementation to ensure activities and strategy employed achieve gender equity. The total budget to support gender mainstreaming has been USD 751,571. https://tnc.box.com/s/zveicnxf9xw23wao9vp73xqmu3rq72</p>

	<p>Women and Youth empowerment – The project facilitates targeted capacity building for youth and women on group dynamics, livelihood improvement projects, various soil and water conservation technologies, record keeping, and leadership.</p> <p>Women in decision making and leadership - To strengthen women's voices in conservation, the project deliberately ensures women's participation in leadership roles at various levels of project management. This has been achieved through the involvement of women in the Board of Trustees (2 out of 10) County Advisory Committee (5 out of 12), Project Steering Committee (5 out of 13), Project Management Unit (3 out of 7), Focal Area Teams (55%), Youth Technology Promoters, and frontline extension officers. This ensures women are involved in decision-making.</p> <p>Women contribution to sustainable and resilient food systems - the project promotes innovative technologies to ensure that the burden for food production is not severe for women but lessened by introducing labour, timesaving technologies. These technologies are water pans, drip kits, high-value fruit trees, and fodder, which contribute to improving the quantity and efficient utilization of water. These interventions have freed more time for women in the watershed reducing the time spent fetching water, firewood, fodder for domestic, agricultural, or livestock use.</p> <p>Increased access to farm assets for women – Gendered implementation of activities ensures extended subsidy to women, youth, and the elderly for them to access assets such as water pans, drip kits, and biogas. The female-headed household, poor and elderly benefit with 50% of subsidy for the three labour/time-saving technologies. The provision of 115 biogas units has provided a clean cooking energy interface that is critical to women's health. Through this strategy, the project has achieved 40 % participation of women in sustainable land management practices, equivalent to over 15,207 women farmers who have adopted climate-smart technologies. The constitution of Kenya guides social inclusivity by providing no more than two-thirds of either gender access to resources and /or opportunities in public affairs.</p>
<p>3. Progress on the implementation of the project's KM approach approved at CEO Endorsement/Approval</p>	<p>Institutions capacitated to monitor Global Environmental Benefits: The project continued to work with strategic technical partners to monitor global environmental benefits. These partners include ICRAF, JKUAT, NMK, and WRA. Consequently, the following was achieved:</p> <ul style="list-style-type: none"> • One water quality database has been established that links both the current and historical hydrological data in one platform shared by all stakeholders. • 33 river gauging stations have been upgraded to automatically log data after 30 minutes intervals, which have improved data accuracy and validity. • Five permanent monitoring sites have been established for the assessment of land health/ degradation using the LDSF tools. • 15 students were granted scholarships to research different thematic areas within the project area. Two journal articles have been published and 14 students are at various levels of completing their research work that was interrupted by COVID-19 through schools and laboratory closure. • Two Power BI dashboards have been established at NCWSC to provide real-time reports on water quality and quantity in treatment intakes and flows in major rivers and reservoirs. <p>Framework for M&E resilience and Socio-Economic Evaluation – The project has established two database systems that are based on DHIS2. This allows for remote data collection and real-time synchronization, analysis and visualization of results. Over 38,701 farmers' details have been captured and securely stored in the database. Similarly, water quality and quantity data are domiciled in the WRA and project-managed database. These data are collected from over 33 river gauging stations in and beyond the upper Tana catchment areas. In addition, the hydrological database contains data and information on weather and baseflow water quantity and quality.</p> <p>The project adopted the Multidimensional Poverty Assessment Tool for the socio-economic evaluation of project impacts in the catchment areas. A consultant was hired to conduct the endline survey. In addition to the MPAT results, focal group discussions and key informant</p>

	<p>interviews were conducted to evaluate the impacts of project interventions. A draft survey report will be finalized by end of August 2021.</p> <p>Knowledge management and sharing of lessons learned The project has established two information-sharing centers; one at the Sagana field office and another at NMK. The two platforms are operational with open access to project information generated both locally, regionally and internationally. The project continued to work with youth and students in 50 schools during the year to increase their awareness of environmental conservation through the establishment of schools' arboreta and tree planting exercises in public lands. Ninety-two schools have been reached by the project through the schools' awareness program</p> <p>The project organized and participated in 6 regional and international meetings to share knowledge and lessons learned with different stakeholders as highlighted in section 1. Cumulatively, 24 such sessions have been held since project inception leading to the establishment of two other Water Funds in the country and several others in development in Africa.</p>
<p>4. Institutional and policy dialogue processes influenced and/or improved</p>	<p>Four priority county policies and regulations – CAC progressed the development of four priority county policies on wetlands and riparian areas, invasive and alien species, mining and quarries management, and rural roads and storm water management. Drafting of four policies was finalized and presented for stakeholders' consultations in Nyeri, Nyandarua, and Murang'a counties. The drafts have been submitted to the respective county assemblies and county executive committees for further processing. Nyeri County held a three days' stakeholder consultations retreat with both County Executive and County Assembly members in Mombasa at Travelers Inn Beach Hotel. UTNWF provided facilitation through a consultant. Similarly, Murang'a County held a one-day stakeholder forum within the same week with the County Agricultural sector coordination committee (CASCOM) to discuss and polish the four policies.</p> <p>Emerging environmental threats – during the year county advisory committee mapped emerging threats in forests and wildlife parks. Forest fires and fires in national parks and reserves were identified as an immediate threat within the catchment area that affects the terrestrial biodiversity of the protected areas. The committee recommended the construction of fire breaks within the forests and shrub lands, establish watchtowers, and capacity build of dedicated response teams drawn from agencies and the communities - Community Forest Associations (CFAs); Kenya Forestry Service (KFS); and Kenya Wildlife Service (KWS). This has been included in the CAC priorities for the coming year and the water fund's strategic plan.</p> <p>Five-year strategic plan - the Trust developed a strategic plan through a consultative process that has mapped the strategic issues for the next five years, partnerships and institutional arrangements, priority activities and budgets as well as resource mobilization strategies. The five-year plan will consolidate the gains achieved so far while deepening the partnerships with stakeholders and widen the scope of institutional and policy discourse in the coming years. The strategic plan is expected to be launched in August 2021 in an all-stakeholders forum, COVID situation allowing.</p> <p>District Health Information System v2 (DHIS2) - During the year, Water Fund team fully operationalized its beneficiary tracking system (District Health Information System 2 tool, DHIS2), created one database, and facilitated various stakeholders' fora to share updates on how to tap in and use the database to improve how the project communicates results on impacts and outcomes. In addition, the database provides a one-stop shop on all activities and enables data-backed lesson learning to inform adaptive management and alignments necessary for the impactful implementation of conservation activities in the watershed.</p> <p>Short Message Service (SMS) platform - The messaging and polling Short Message Service (SMS) platform now covering 44,000 farmers enabled continued communications and area-specific conservation messaging, weather advisories from the county meteorological</p>

	<p>departments, and monitoring despite the constraints of Covid-19 on travel restrictions. Unlike in most parts of the world, conservation activities continued despite the COVID-19 pandemic. The SMS platform offered a good alternative for the project to innovatively support the distribution of project materials, engage with beneficiaries and track and report on implementation progress.</p> <p>Partnership with Counties – the Avocadoes promotion in partnership with Murang'a county was scaled up from 1 to 2 million Hass avocado seedlings over two years. The joint project is a 50:50 cost-sharing to diversify farm incomes and food security for farmers in the watershed and contribute to well-conserved farmlands and riparian lands. The Water Fund supported technical officers to provide extension services and purchased 350,000 avocado seedlings for farmers within priority areas of the watershed. The county government-supported market linkage for farmers and matched the number of seedlings purchased by UTNWF. The avocados are expected to mature in 5 years with an expected total production of 250,000 tons for export and gross income of USD 100 million per year. The partnerships with Laikipia and Nyandarua counties were formalized, MOUs signed and joint work plans for the first year developed. Implementation of leveraged activities is ongoing and co-financing will be tracked and reported every financial year.</p> <p>Fundraising for the Endowment Fund - Efforts to raise capital for the Endowment Fund were enhanced with a re-energized fund-raising campaign led by the Trustees. The campaign has a new timeline to reach the target of USD 7.5 million by end of 2023. The fund has USD 2.21 million under-investment, including the seed capital from the GEF grant, The Coca Cola Foundation, Frigoken, and other beneficiaries and private donors.</p> <p>GOK Monitoring Field Visits - The Project Steering Committee (PSC) held its half-year meeting virtually in December and 4 days field monitoring visit in January 2021. The technical field visits informed preparations for the final IFAD Mission. During the pre-completion IFAD supervision Mission in June 2021, the Ministry endorsed the transition of the Water Fund as an independent entity and project completion by September 1, 2021, and December 30th, 2021 respectively.</p> <p>Governance Structures and growth - Board Of Trustees (BOT) and Board of Management (BOM) held their regular meetings within the year. Key priorities for the governance teams were the preparation of a 5-year Water Fund strategic plan, the transition of the project to an independent entity and fundraising. The BOT expanded with two trustees, Governor F. T Kimemia of Nyandarua and Sn. Engineer Ajit Tulo of Pentair, now a total of 10 trustees representing public and private sector as per the trust deed. The transition to an independent entity is nearly complete with Trust policies and procedures manuals developed, four key staff recruited including an Interim Executive Director, Conservation Program Manager, Field Conservation Coordinator, and M & E officer. The transition is on track for September 1, 2021.</p>
<p>5. Engagement in partnerships (including public-private)</p>	<p>As a private non-profit institution, the UTNWF Trust continues to engage with the public and private sectors and build partnerships. During the year, the project continued to strengthen existing and forge new ones to leverage and support to achieve its goal and objectives. These public-private partnerships include:</p> <p>County Government partnerships – during the year, two MOUs were signed with Nyandarua and Laikipia Counties, bringing to four the structured partnerships with county governments covering the whole area the project operates. These structured partnerships with the four counties enable the water fund to leverage on seconded staff, aligning/leveraging investments, and technical staff for extension services, shared workplans, and participatory monitoring, reporting, and learning. The scaled-up Hass Avocadoes promotion project with Murang'a county stands out as an example of achieving mutual goals and objectives and directly impacting the livelihoods of communities and conservation of the watershed.</p> <p>Partnerships with “expert institutions” – water fund model is based on science and partners with science and research expertise provides that backbone. For instance, the International Centre</p>

	<p>for Research in Agroforestry (ICRAF), Jomo Kenyatta University of Agriculture and Technology (JKUAT), and National Museums of Kenya (NMK) provides specialized services such as establishing baselines, data analysis and graduate training. University of Maine – USA partnership has provided a full-time scholarship for a Kenyan Ph.D. candidate to study and expand one of the water fund biological assessment monitoring tools, BCG for broader application in Kenya and Africa. Water Resources Authority, the government mandate agency in water services provides staff and expertise for water quality and quantity analysis, storage, and retrieval of hydromet data and informs policy on water resources allocations. Plan Vivo, a carbon standards certification company, and Stanford University are providing technical and specialized skills to have EX-ACT methodology certified and finalize the Water fund’s carbon project for validation and certification.</p> <p>Implementation partnerships – Water fund partners with local NGOs and community-based organizations (CFAs, WRUAs) and other organized Farmer institutions for community mobilization, input procurements and supplies, cost-share collection support, farmer learning, and exchange tours, and participatory M & E among others. Partnerships with Sustainable Agriculture Community Development Programme (SACDEP); Ndakaini Dam Environmental Conservation Association (NDEKA); CARITAS, Murang’a; Green Life Development Initiative; Sasumua and Upper Maragua WRUAs; Zuti, Gatara, and Kiburu CFAs continues to strengthen in support of water fund activities implementations.</p> <p>Private sector partnerships - The Fund continues to seek and establish partnerships with private sector for direct funding, technology and skills leverage, implementation support and market linkages among others. One such partnership is with International Business Machines Corporation (IBM) to develop a knowledge product, leveraging technology and global experiences, as an innovative tool for addressing water challenges in Africa. From this partnership, prototype digital tools and data analytics for UTNWF were developed. In the ongoing partnership with Frigoken, a green beans processing company has a funding stream to water fund endowment, leveraged farmer support for inputs extension services, and market link for green beans. Other partnerships with the private sector provide market linkages such as Green Pot Enterprises (GPE) and Horizon Business Ventures (HBV) who have off-take contracting for Giant Bamboo and rose geranium respectively.</p>
<p>6. Innovations and scaling – up successful approaches and technologies</p>	<p>The UTNWF trust being the first Water Fund in the continent has offered numerous lessons to many stakeholders across the continent. A summary of key lessons is presented below:</p> <p>Approach: The Water Fund model has been studied by many organizations like the Water Sector Trust Fund of Kenya. WSTF approached TNC to be assisted to develop a sustainable financing model. An MoU was developed where TNC helped engage a top-notch consultant [Mr. Barry Spergel] to design a sustainable financing mechanism for the water sector. This was completed in 2016 and WSTF has since rebranded to “The Water Fund” (ii)The approach has been shared with many others including Resilient Food Systems (ICRAF), Stockholm International Water Institute (SIWI) for a project involving two cities in the Great Rift Valley, Mombasa and Eldoret in Kenya, Addis Ababa in Ethiopia, Sebou Basin in Morocco, Tanga, Tanzania community who learned from Nairobi and are now designing a similar model. The approach was prominently featured during P4G [Global Green Growth] launch in Nairobi in 2015, Global Shapers Conference at UNEP in 2018, Payment for Ecosystem Services conference by FAO at ICRAF in 2017, GEF Food Security IAP Launch in Nairobi and Addis (2017) Beira city watershed BIOFUND project by WWF in Mozambique as well as many international fora and meetings.</p> <p>Resources: While this is the first true public-private partnership that brought together stakeholders to contribute resources and manage them jointly to bring conservation success, there have been many lessons. These include:</p> <p>(i) The trust has been able to mobilize, receive and deploy non-credit financial resources from both the public sector- over \$15million in cash and kind over 5 years. The trust further mobilized over \$4million from private sector members and foundations (mainly</p>

	<p>in cash). The resources have supported conservation work as well as operations of the trust.</p> <p>(ii) Human resources from public sector. The trust has five staff seconded from the county and national government agencies on a full-time basis, an initiative that other sites want to emulate e.g. Eldoret-Iten Water Fund (EIWF) with four staff placed under a similar situation. The trust further engages local extensions staff from counties on a short contract to provide frontline support. An estimated 50 field staff have served the trust over the last 5 years.</p> <p>(iii) Vehicular capacity. The trust leverages transport capacity available in county and national government agencies like vehicles and motorbikes- to get most of their collaborative activities undertaken on time. Such resources are accessed via joint work plans or equipment requests and they have augmented transport facilities available with the trust.</p> <p>(iv) Volunteers: The Trust has mobilized a lot of volunteers to support the ongoing work. Green Belt Movement (GBM) working with their local partner in Gura -Sagana sub-watershed between 2014 -2016 enrolled 20 volunteer youths to learn and support conservation work over a 2-year duration leading to the conservation of 8,500 farms that were later certified for Rainforest Alliance standard for Arabica Coffee.</p> <p>(v) Focal Area Teams (FAT). The Trust piloted the establishment of a site-specific focal area team to discuss and resolve bottlenecks to implementation. This has been very successful and many projects and new sites like the ideas.</p> <p>Human Resource Setup: The Trust has developed a great staffing model and defined skill sets needed from each position to be able to implement a Water Fund. This model is robust and has been adopted by stakeholders in other geographies like Eldoret, Mombasa, and Tanga. An org chart is available on request.</p> <p>Governance Set up: UTNWF Trust has shown that both public and private sectors can work together. The model has worked well by ensuring balanced representation from both sides and inviting the right level of seniority to engage at both the BOM and BOT levels. The term periods on which members are elected and the well worked out modality for engagement and disengagement for the volunteer leaders have also worked well. The trust deed has also served as a great tool for operating the Trust.</p> <p>The trustees decided to constitute a County level advisory committee and sustain it in the long term to be able to offer alignment with the county integrated development plans and offer community representation within the governance system. This team also mobilized local-level contribution into the trust as well as spreading communication and awareness at the local level.</p> <p>There has been overwhelming demand from stakeholders in water, environmental conservation, and natural resources management space for presentations and meeting attendance. Being able to be selective for the trust to optimize the time given by the various leaders and staff is important. Selecting only the most aligned and impactful of such meetings to participate in should be done.</p> <p>Financial model: There has been a significant change of heart and celebration of results as both public and private sectors have offered lessons that Water Funds can raise money from both sectors and deploy it to conservation work. The trust has also established a mechanism for long-term financing with an endowment fund being established. While this fund has continued to grow and favorably compete for funding going direct to on-the-ground investments. With over \$2.2million raised and invested, the trust should have enough money to cater for operational and staff costs by end of 2023. A campaign team is working on this and has a lot of lessons. Sustaining the yields at over 10% annually is a great lesson for other public-focused investments.</p> <p>Scaling Up The Water Fund model has been greatly appreciated in other geographies in the continent. TNC has taken lead in sharing the model with other geographies in the continent. Having first facilitated sharing with Cape Town city to avert the day-zero crisis in 2018, their water fund is</p>
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	<p>now under implementation and the city just invested \$4.2million towards its activities. This comes alongside other investors like Coca-Cola, PepsiCo, JP Morgan, REMGRO, and Levi Strauss. French Development Fund (AFD) has teamed up with TNC to cost-share in the development of Dakar, Senegal, and Mombasa Water Fund in Kenya where the World Bank infrastructure project is investing \$5 million on the pilot- proof of concept projects. Coca-Cola's RAIN project supported Catholic Relief Services in designing the Freetown (WAPWF) Water Fund in Sierra Leone while WWF with support from the MAVA Foundation and the GEF Small Grants Program of UNDP have supported the development and implementation of Sebou Water Fund in the Kingdom of Morocco, the first in North Africa. The GEF in the current cycle 7 has offered \$2.98 million for implementation of Eldoret -Iten Water Fund in Kenya while Water for People and Catholic Relief Services are co-funding the design of the Blantyre Water Fund in Malawi. Several TNC supporters have invested in the development of Addis Ababa and Tanga Water Funds within the East African region. In total, two water Funds are under full implementation, 7 under development while 6 are undergoing feasibility analysis with key stakeholders.</p>
<p>7. Contributions towards GEF Focal Areas and (if applicable) GEF7 core indicators⁶</p>	<p>Land Degradation/Sustainable Land Management The project has directly reached 38,923 smallholder farmer families (20,070 male and 12,840 female), with a total of 72,890 ha of farmlands, put under sustainable land management (SLM). These families received various project services including training on SLM, rainwater harvesting through farm water pans installation (14,584), 583.5 Km of terraces, 298 Km of riparian lands, 45.9 Km of dirt road shoulders, and distribution of 3.4 million assorted quality tree seedlings of different species.</p> <p>Biodiversity Conservation The project has undertaken forest restoration in 2 main forests within Aberdare National Park, which includes 200 hectares of degraded forests where habitat could be improved for some of the world's most iconic wildlife, including endemic black rhino, African elephant, leopard, endangered mountain bongo antelope, and buffalo, amongst others. The NMK continues to monitor the types and abundance of both aquatic and terrestrial biodiversity in the catchment towards calibration and validation of the biological conditions' gradient. In addition, a wetlands' food and feed resources assessment for the upper Tana was developed to provide a guide on potential biodiversity benefits that improve the socio-economic livelihoods of smallholder farmers while aiding agri-biodiversification on farms and riparian lands.</p> <p>Climate Change mitigation To mitigate the impacts of climate change and increase resilience, the project continued to promote carbon stocks in the upper Tana catchment through agroforestry, nurseries establishment and management, public forest rehabilitation, conservation of riparian lands, and wetlands protection. Projections based on the current land-use changes being implemented by the project, yield about 5,771,244 t CO₂e will be avoided and/or sequestered by the end of the project. This is more than the 1.6 million tons of CO₂e that were envisioned at the start of the project. Plans are underway to have this achievement certified under the Plan Vivo carbon scheme.</p> <p>Food Security IP Targets To date, 38,923 farmers are involved in climate risk management, natural resources management, or disaster risk reduction activities. The installed water pans (14,584), drip kits (4500), and 72,890 hectares of farmlands under SLM contribute directly to improved food security for households in the watershed. In addition, crops diversification and off-season cropping through irrigation improved in-situ water harvesting through grass steeps and terraces build more resilience to the production systems for smallholder farmers hence contributing to food security.</p>

⁶ For projects in the Climate Change Focal Area, please provide an overview table with numeric results for the appropriate indicators (provided in the tracking tool). In other words, for all projects there should be a column stating amount of CO₂ reductions achieved, for energy efficiency projects a column with numbers for energy saved, etc. Additionally, kindly note that GEF 6 and GEF 7 projects are expected to report against [GEF7 core indicators](#).

	<p>Water Quantity and Quality</p> <p>Water quality parameters (turbidity and total suspended solids, TSS) analysis for the 33 river gauging stations shows a correlation between TSS and turbidity. The average annual (4-year average) flows in the UTNWF increased by 40% compared to baseline averages before the project. The quantity in the Gathanji micro catchment (treatment) is 19% more than that in Marogoya micro catchment (control). These analyses show average annual water quality increased across the treated micro-watershed, with significantly less sedimentation than in the control. Moreover, rivers in the micro-catchments, such as the Maragua river and Chania river have recorded 27% and 31% reduction in sedimentation while water quantity trends in the treatment micro watershed have increased. For instance, Kimakia and Kiama, the two main rivers feeding the Ndakaini dam registered a 12.4% increase in 2019 against the flows in 2018 and a 3% increase in 2020 against the flows in 2019.</p>
<p>8. Monitoring tools used for the reporting period⁷</p>	<p>MPAT based baseline data for socio-economic status was used to determine the baseline condition for households being targeted. An endline MPAT survey is underway and will be completed by September 2021. In addition, 48 FGDs and 12 out of 24 Key Informant Interviews (KIIs) have been conducted. This tool measures different indices that inform the impacts of project activities and intervention on communities' livelihoods and wellbeing.</p> <p>Hydrological data was gathered using 33 units of automated equipment, seven of which have been fitted with telemetric communication that sends data at user-defined intervals to the NCWSC for inclusion in their database. Data generated has been analyzed and availed in the project's visualization dashboards and partners' (WRA and NCWSC) premises.</p> <p>The project is undertaking flow campaigns, sediment sampling, and in-situ turbidity measurements by deploying a combined team from both UTNWF and Kenya Water Resource Authority. All analysis is conducted at the IFAD-supported WRA's laboratories in Murang'a and Embu. Data produced in these activities are jointly analyzed and uploaded to the DHIS2 platform.</p> <p>Household polling is conducted using a mobile phone communication platform that has so far reached 44,725 smallholder farmers. The same tool is used to disseminate extension messages to rural farmers and early weather advisories to farmers for alternative farming methods and/or adoption of different cropping patterns. The platform is also used to address and resolve farmers' concerns and/or grievances.</p> <p>The Farm Specific Action Plan Tool is now adapted for mobile phones to be used for collecting routine monitoring data for beneficiaries. This includes farmers' details on locality, gender, age, contact details, and decision-making at household levels. The tool in addition captures the initial conditions of the farm and recommended interventions for optimum soil and water conservation. The tool is then used to track and graduate farmers based on the level and extent of implementation of the recommended measures.</p> <p>A best practice from this project is engagement with a center within Jomo Kenyatta University to undertake long term hydrological monitoring and train postgraduate students based on the work supported by GEF through IFAD and TNC. 15 postgraduate partial scholarships were awarded to needy but bright students who are helping analyze data and document lessons from the Upper Tana region. The studies are conducted on various themes including hydrology, climate change, land-use, and landcover change, socioeconomics, biodiversity, food security, among others. Two articles have been published in peer-review journals.</p> <p>In collaboration with ICRAF, the project has identified and established five permanent monitoring sites to assess land degradation in the catchment area. Baseline data and reports have been generated and an impact evaluation is set to be conducted after five years of the baseline. Deployment of new tools like Power BI (Business Intelligence) developed by Microsoft for</p>

⁷ Please briefly mention: i) how global environmental benefits are measured, ii) how project indicators are measured – and how national GEF focal point is involved in M&E – if applicable.

	<p>financial management and information sharing is a first for conservation deployment. The tool is currently being used to create interactive visualizations of the project's data.</p> <p>The project has worked with Safaricom (East Africa's leading telecommunication company) to develop low-frequency bandwidth SIM cards for telemetric equipment that ensure timely relaying of data despite the equipment located along the river valleys or weather. Six stations were installed.</p> <p>The Ex-Ante Carbon Balance tool was used to assess the amount of carbon and other GHG gases that have been sequestered or avoided. With the current land-use changes implemented by the project, about 5.8 M tons of CO₂eq will have been avoided/ and/or sequestered by the end of the project.</p> <p>Global Positioning System (GPS) used to geo-reference all the project activity sites including households reached, installed technologies such as water pans, biogas units, drip kits, etc. and in combination with Geographic Information System (GIS) tools used to prepare maps and spatial aids for extension teams and other stakeholders.</p> <p>GSM/Mobile phones, in combination with the SMS platform, are used for messaging, polling, and tracking materials distribution, including targeted surveys on tree survival rates.</p> <p>Global environmental benefits The project is tracking the global environmental benefits as listed below⁸;</p> <ul style="list-style-type: none"> • Increased land under integrated management • Greenhouse gases emissions avoided or reduced (tones CO₂) • Increased climate resilience • Hydrological regulation • Total outreach <p>Project Indicators</p> <ul style="list-style-type: none"> • Change in water quality and quantity – tools used include onset water level loggers, telemetric equipment sans water quality samplers. Hydrological data is stored and analyzed in DHIS2. • Land degradation – use of LDSF tools to monitor and evaluate land health and the extent of land degradation. • Biodiversity – in collaboration with NMK, the BCG tool is used to assess the abundance and composition of both aquatic and terrestrial biodiversity relative to the respective tiers that are based on the nature of ecosystems that organisms thrive in. • Livelihoods, food production, poverty level, and increased ability of people to manage environmental and climate-related risks are measured through surveys conducted using MPAT tools and outcome surveys using SMS platforms, FGD and KIIs. • The number of farmers reached and those adopting various project interventions are tracked using the DHSI2 tool. Disaggregation based on gender and age is done automatically as farmers' data are captured in the field. This tool is also used to capture other indicators like individuals involved in climate risk management, and natural resources management practices. • Greenhouse gases emission status and sequestration are determined through the Ex-ACT tool. • The project further tracks the extent of land that has been put under sustainable land management as well as riparian areas that have been conserved and protected. This data is captured in the DHIS2 database.
<p>9. Other matters</p>	<p>National priority for the Kenya government: UTNWF maintained its status as a priority project and informed the feasibility and design of the Eldoret-Iten water fund as the second water fund in Kenya, funded under GEF7. In addition, mainstreaming of the Water Fund modality in the National and County governments (and their agencies) continued enabling leveraging of</p>

⁸ UTNWF Project Design Report. 2016. Volume II.

	<p>financial and human capacity for achieving the Water Fund goals. Nyandarua and Laikipia county governments signed MOUs with UTNWF outlining shared priorities for the next five years.</p> <p>Water Funds are acknowledged by GEF as a scalable initiative across Africa. Due to the growing demand to link source water protection investment with downstream water beneficiaries in cities and major industries across many countries, the GEF recognizes the promise of water funds and the need to build partnerships that ensure an accountable process for resource flow. To scale up the water fund model in Kenya, TNC has partnered with IFAD and submitted a funding request for USD 2.63 million under GEF VII to support a second water fund (Eldoret – Iten Water Fund). The project design and full proposal (ProDoc) were completed during the year.</p> <p>The Water Fund model was identified as a best practice for conservation of Kenya's tropical Water Towers by the Kenya Water Towers Agency who endorsed a proposal for the Kenya government to allocate funding to support conservation work in three more critical water towers in the country. Two have undergone successful feasibility studies and one is designed and ready for implementation to start in 2022.</p> <p>Global support and prioritization within TNC – UTNWF project was selected among the best-performing programs in TNC-supported water funds across the globe after a competitive nomination process. The project will therefore receive prioritized technical support, fundraising, and greater visibility to internal and external stakeholders.</p>
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C. CRITICAL OPERATIONS BOTTLENECKS

*Please briefly provide any update of current or potential challenges that impede the correct project implementation – if applicable.
Please include also brief recommendations for follow up*

The overall project performance during the year was highly satisfactory. The targets laid out in the annual work plan were met or exceeded despite the impact of COVID-19 on the operational mode of the project e.g., lockdowns and movement restrictions. The project continued to leverage technology to enable its activities. Importantly, the project innovatively applied the mobile phone SMS platform to continue facilitating field activities including demand creation for conservation materials, coordination of distribution, target surveys as well as continuous engagement and conveyancing of extension messages and other advisories to farmers, at scale.

Constraints encountered during the period under review

- The optimal implementation of project activities was largely impacted by the COVID-19 pandemic. The impact slowed down fundraising campaign efforts, negatively impacted engagement with farmers at field level and overall adoption rates of activities at the community level.
- Over the reporting period, CAC experienced a high turnover of members with two from WRA, one from NEMA, and one from KWS transitioning out of their stations and therefore new officers joining CAC.
- Delayed delivery of water pan liners into the country affected the timely completion of lined water pans. This affected uptake of the water pans and motivation of the technology promoters.
- Due to the ongoing pandemic and restricted field activities, TNC halted the recruitment of graduate interns during the year. This reduced the on-ground staff capacities the project had planned for and therefore activity implementation in all the sub-watersheds.
- Resignation of key project staff, project officer and M&E officer in December 2020 and January 2021 respectively increased work pressure on remaining staff from the 3rd quarter of the year.
- Demands on staff time to support transition activities also impacted staff time devoted to project delivery.

Recommendations to follow up

- Endowment campaign – the WF Trust leadership and the resource mobilization committee should continue with the campaign as a top priority.
- The WF Trust transition should be allowed the two months’ window (July and August 2021) to fully operationalize its systems and staffing for a seamless transition by 1st September 2021.
- The WF Trust should embrace and institutionalize the use of technology for meetings and organization business, whenever practicable, to optimize volunteer leaders’ time and resource use efficiency.
- The project should continue to leverage the four counties and other government agencies to maintain investment levels necessary for sustainable watershed conservation.
- Mapping of landslides and landslide-prone areas. Resources and expertise should be sought to carry out this activity and help in providing early warning systems that will inform mitigation actions for impacts of landslides on ecosystems and peoples’ livelihoods.
- Remote sensing and other technologies for M&E. The WF should continue, in collaboration with other stakeholders (e.g., TNC’s global M&E team), to leverage the remotely sensed data to map and track sediment and nutrients loading in the watershed at scale.
- To validate data generated from the Ex-ACT tool analysis, the project will work with FAO and IFAD resource persons as a follow-up to the training in June 2020.

IFAD’s comments

We concur with the bottlenecks identified and recommendations made above as the project completes its activities. The follow-up actions will contribute to the sustainability of the project interventions.

GEF OFP comments

- Concur that the COVID situation slowed down implementation of the program
- Fund raising for the Water Fund Trust remains very low and this needs to be strengthened, without which sustainability and the intended purpose will be lost
 - Engagement with the County Governments took long especially two of the counties entered MOUs in the last year of the Project. There is therefore need for the established Trust to continue engagement to ensure sustainable support to the investments and upscaling of the same in other areas within the Upper Tana Catchment

	<ul style="list-style-type: none"> - The Strategic Plan for the Trust, while the draft is available, has lagged behind in being completed, which ideally should have been in place at the time of the Trust transiting to independence in July 2021. - Private Sector engagement, while some progress has been made, remains relatively low. There is need for an aggressive strategy to ensure the same happens
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D. GEF - OVERALL PROJECT RATINGS⁹	
<i>Please indicate overall rate for IP, DO and Risk following tables 1 and 2 below</i>	
Implementation Progress Rating (IP) Based on progress made for the given reporting period (HS/S/MS/MU/U or HU)	Highly Satisfactory
Development objective Rating (DO) Based on the likelihood that by the end of the project, implementation will achieve its stated objectives (HS/S/MS/MU/U or HU)	Satisfactory
Risk Rating Based on the overall risk of factors internal or external to the project which may affect implementation or prospects for achieving project objectives (H/S/M o L)	Moderate Risk
GEF OFP comments: Concur with the overall rating of the Project	

**Table 1
IMPLEMENTATION PROGRESS AND DEVELOPMENT OBJECTIVE - RATING CRITERIA**

	IMPLEMENTATION PROGRESS (IP)	DEVELOPMENT OBJECTIVE (DO)
Highly Satisfactory (HS):	Implementation of all components is in substantial compliance with the original/formally revised implementation plan for the project. The project can be presented as “good practice”.	Project is expected to achieve or exceed all its major global environmental objectives, and yield substantial global environmental benefits, without major shortcomings. The project can be presented as “good practice
Satisfactory (S):	Implementation of most components is in substantial compliance with the original/formally revised plan except for only a few that is subject to remedial action.	Project is expected to achieve most of its major global environmental objectives, and yield satisfactory global environmental benefits, with only minor shortcomings.
Marginally Satisfactory (MS):	Implementation of some components is in substantial compliance with the original/formally revised plan with some components requiring remedial action.	Project is expected to achieve most of its major relevant objectives but with either significant shortcomings or modest overall relevance. Project is expected not to achieve some of its major global environmental objectives or yield some of the expected global environment benefits.
Marginally Unsatisfactory (MU):	Implementation of some components is not in substantial compliance with the original/formally revised plan with most components requiring remedial action.	Project is expected to achieve of its major global environmental objectives with major shortcomings or is expected to achieve only some of its major global environmental objectives.
Unsatisfactory (U):	Implementation of most components is not in substantial compliance with the original/formally revised plan.	Project is expected not to achieve most of its major global environment objectives or to yield any satisfactory global environmental benefits.
Highly Unsatisfactory (HU):	Implementation of none of the components is in substantial compliance with the original/formally revised plan.	The project has failed to achieve, and is not expected to achieve, any of its major global environment objectives with no worthwhile benefits.

⁹ As per GEF- SEC Results Based Management Reporting Guidelines for GEF Trust Fund and LDCF/SCCF
<https://www.thegef.org/sites/default/files/documents/AMR%20Reporting%20Guidelines%20-%202012.pdf>

Table 2
RISK RATING CRITERIA

High Risk (H)	There is a probability of greater than 75% that assumptions may fail to hold or materialize, and/or the project may face high risks.
Substantial Risk (S)	There is a probability of between 51% and 75% that assumptions may fail to hold and/or the project may face substantial risks.
Modest Risk (M)	There is a probability of between 26% and 50% that assumptions may fail to hold or materialize, and/ or the project may face only modest risks.
Lowest Risk (L)	There is a probability of up to 25% that assumptions may fail to hold or materialize, and/ or the project may face only modest risks.

E. MEASURING PERFORMANCE	
<i>Please briefly provide narrative justification for the previous GEF Overall Project Ratings¹⁰</i>	
<p>Implementation Progress (IP): information on progress, challenges, and outcomes on project implementation activities</p> <p><i>Achievements and impact to date – if applicable</i></p>	<p>1.0 Water Fund Management Platform Strengthened and Operational</p> <p>1.1 Water Fund Management platform strengthened</p> <ul style="list-style-type: none"> • Institutionalization of the UTNWF completed and a fully functional BOT (10 members), BOM (9 Members), and CAC (12 members) in place. • Trust governance successfully held 4 Annual General Meetings, returns for compliance to Lands Ministry, and KRA done. Has met all requirements for Kenyan registered entity. • Endowment funds were capitalized with USD2.4 million and funds invested in an interest-bearing instrument at 11.05% for 5 years. A fundraising campaign is ongoing with Trustees leadership to reach USD7.5 Million by December 2023. • Operation policies and procedure manuals for Governance; HR; Finance; Admin and Operations and Investments developed. • A five-year strategic plan was developed. To be launched in Aug/Sept 2021. • Trust keys staffing completed with interim Executive Director, Conservation Program Manager, Field Conservation Coordinator, and M & E officer recruited • The governance organs' (BOT, BOM, CAC, and PSC) meetings were held regularly over the 5 years. Guided the implementation, fund raisings, and transition of the project to the Trust as an independent entity by September 1, 2021. • Key reference documents include: <ul style="list-style-type: none"> ○ KRA, NSSF, and NHIF registration certificates ○ Strategic Plan ○ 2021 annual report link: https://tnc.box.com/s/9lv95jhjd41krfoeg95ho04aankoexs ○ 2020 Annual Report link: https://tnc.box.com/s/3wy9dhuthr3zrh0rxz4hzubd5czavc4e ○ 2019 Financial report link: https://tnc.box.com/s/m4ojgyd6qdpekiyde3jka42ce20r1w6o ○ UTNWF Certificate of incorporation & Trust Deed link: https://tnc.box.com/s/a8k4webywwck5xlz3g6k3p67n6f4061t <p>1.2 Incentives to support agriculture and food value chain</p> <p>Rewards for ecosystem services scheme for farmers developed in the form of high-value fruit trees, seedlings, beehives for installing in riparian areas, biogas digesters, and low head drip irrigation kits. These technologies have been rolled out to reach farmers. Biogas units benefiting 115 households, Drip irrigation kits 418 farmers, and 120 farmers with Beehives.</p> <p>Achievements towards contributions for watershed management policies and strategies include integration of the water funds approach by Kenya Water Towers Agency; the design for GEF 7 of the Eldoret-Iten water fund (EIWF); PES scheme; four-county MOUs that aligned count priority activities and budgets to leverage watershed conservation and; the four policies under development by CAC and county governments on Wetlands and riparian areas, Invasive and alien species, Rural roads and storm water and Mining and quarrying.</p> <p>2. Improved Upper Tana Catchment Ecosystems that Support Livelihoods, Food Security, and Economic Development</p> <p>2.1 Increased land area under INRM, SLM</p> <ul style="list-style-type: none"> • To date, Water Fund conservation work in the Upper Tana has reached 38,923 rural smallholder farmers covering 72,890 hectares of land. • Development of 14,584 rainwater harvesting water pans for storing irrigation water. As a result, scale-out by 960 households in neighboring counties have established 1,145 water pans because of the impact created by the project. • 8,500 coffee farms (3,500 ha) put under SLM and attaining Rainforest Alliance standard. • 253.8 km of riparian land under active protection across the watershed during the year. Cumulatively from the pilot phase, 298 km of riparian land was conserved. • 45.9 km of rural road shoulders conserved and protected from surface runoff erosion, reducing sediment wash off from dirt roads to rivers. • Three community water pans were rehabilitated in Sasumua and Maragua sub-watersheds. The dams provide a combined storage capacity of 43,100 m³ every rain season for domestic and livestock use.

- 786.5 km of grass strips planted in gently sloping farmlands to check on surface runoff and erosion. Cumulatively, 960.9 km of grass strips established and controlling runoff and soil erosion in farmlands.
- 316.4 km of terraces excavated and/or rehabilitated by 10,147 (6227 male and 3920 Female) farmers. Cumulatively, a total of 583.5 km of terraces done and stabilized with grasses. This has reduced surface runoff and erosion from farmlands and increased rainwater retention and improved farm productivity.
- 15 tree nurseries capacitated, certified by KEPHIS, CDA, and KFS now sustainably raising diverse tree seedlings for farmers, county governments, and projects like water fund as rural-based enterprises.
- 65% of the project beneficiaries (confidence level = 95%; margin of error <1%), have more than 25% of their land under Sustainable Land Management (SLM) compared to 46% in the baseline.
- 18% of the project beneficiaries (confidence level = 95%; margin of error <1%), have been graduated. They include farmers with more than 75% of their land under SLM. This is an improvement compared to the 1% of project beneficiaries in the baseline.

3.0 Robust KM and Learning systems implemented

3.1. Institutional capacity building

- The LDSF has been developed, and the tool is now deployed in five monitoring sites.
- Automated river monitoring stations were established in 28 locations. The WRA hydrological database, based on the DHIS2 platform, has been developed allowing for a dedicated database for UTNWF data management.
- Power BI (Business Intelligence) has been deployed for real-time tracking and visualization of water quality and quantity parameters at dashboards located in NCWSC’s offices in Ndakaini and Ng’ethu.
- A digital public screen, 3x4 m, has been installed at the NMK for sharing lessons with the public targeting an estimated 50,000 viewers per year with conservation and innovations messages.
- The UTNWF hosted the GEF Expanded Constituency Workshops to the project site for a field visit of the IFAD/TNC GEF 6 Integrated Approach Program pilot project in February 2020. About 100 conference participants were hosted in the watershed for a learning tour. The project highlighted key lessons and good practices from our work and experiences with respect to key project components discussed multiple perspectives and ideas on various project components. This field visit also allowed participants to interact directly with project managers, beneficiaries, co-financiers, and other relevant stakeholders.
- Real-time data collecting tools have been deployed in all seven critical water monitoring stations in the watershed that supply water to the city of Nairobi. Twenty-eight (28) river gauging stations have been automated to efficiently provide data needed for impact evaluation on water quality and quantity improvements.
- 26,119 farmers continue to receive two extension information messages each week through a mobile phone platform covering the whole Upper Tana watershed.
- A GIS database to track the water pans, inclusive of crops supported by the irrigation water and condition of the water pan liners, has been developed at TNC.

3.2 Framework for M & E Resilience and Socioeconomic benefits

Database and technology – a cloud-based database, DHIS2, established and fully operational with capacity to integrate socioeconomic and hydromet data. The database holds, in a searchable format, all the farmers' biodata, technologies adopted, scale and metrics of each activity implementation, georeference, and farmer contributions in cost-share among others. The database has enabled farmer categorization and other segregations that now feeds into key decision making, reporting and follow-ups. For water quality and quantity, a database that hosts data for 33 River Gauging Stations (RGS) and six weather stations in Upper Tana is operational. Real-time data collecting tools have been deployed in seven critical water monitoring stations in the watershed that supply water to the city of Nairobi. All the other 27 RGS have been automated to efficiently provide data to the database. This database is accessed by stakeholders and used for prioritization of conservation activities as well as providing data for research purposes.

Outcome and impact reporting – at baseline an MPAT based digital survey comprising 1,004 households was completed. The project is currently undertaking an end-term evaluation and Trust will report on the extent of contribution towards its goal and development objective against baseline condition. The MPAT baseline report is available on this link: <https://tnc.box.com/s/u521wgp10fjzmzmkrbx81uufm7176iy3>.

¹⁰ If necessary, please expand to 1 or 2 additional pages.

	<p>SMS platform – this mobile phone-based platform is hosted by eco-mobile and currently has over 44,000 farmers. The project disseminates bi-weekly extension messages and weather advisories to registered farmers in the eco-mobile SMS platform. Farmers can self-register into the platform or be registered during the development of a farm-specific action plan. The project innovatively applies the mobile phone SMS platform to continue facilitating field activities including demand creation for conservation materials, coordination of distribution, target surveys as well as continuous engagement and conveyancing of extension messages and other advisories to farmers, at scale, during these Covid-19 times.</p> <p>3.3 Knowledge Management and sharing of lessons</p> <p>Information centers – to share lessons, the project established two information centers each at the county (information center domiciled in Sagana - https://bit.ly/3aLuZeO) and a national level - information center established at the NMK (https://bit.ly/3cWMk5l). To reach out to the general public, a large outdoor digital screen has been mounted at the NMK that displays the work and achievement of the project to thousands of people visiting the Museums every month.</p> <p>Resilient Food Systems – water fund has used the RFS platform to share and learn with the other 11 country projects under the GEF IAP programme. The project hosted RFS workshop participants for a field site visit in 2019, has shared private sector engagement and nature-based solutions for watershed conservation and other experiences over the years. The WF has published within the RFS knowledge products including the following, with hyperlinks provided to these materials:</p> <ul style="list-style-type: none"> • RFS Communication Toolkit • RFS Communication and Knowledge Management Strategy • RFS Knowledge Management Toolkit • RFS Branding Guidelines • The value of water: Making a business case for one of Kenya’s most vital resources (https://bit.ly/3nsKygf).
<p><i>Recommendations to improve IP</i></p>	<p>The Upper Tana Nairobi Water Fund Trust has integrated the lessons learned and advice from the IFAD annual supervision missions (ASM) and midterm review (MTR) in developing the next five years strategic plan. The strategic plan will guide the continued implementation of the water fund conservation activities, stakeholder engagement and fundraising from public and private sector to maintain the gains realized and scale out to the unreached farmers in the watershed. The strategic plan compliments the 10-year business case, launched in 2015 and is now in its second phase of implementation until 2025.</p>
<p>Development Progress (DO)</p> <p><i>Achievements and impact to date – if applicable</i></p>	<ul style="list-style-type: none"> • Achieving a Well Conserved Upper Tana Watershed <p>The project is targeting achievement of a well-conserved river basin with improved water quality and adequate quantities for downstream users and strong benefits to agricultural communities in the source watershed. Beneficiaries include local community members in the Nairobi source watershed, public utilities (water and power) as well as individual and private sector water users.</p> <p>To date, the project has engaged 38,923 farmers whose lands are in the high-priority areas of the watershed. The high erosion levels from steep sloping fields and unprotected river riparian areas that traditionally erode throughout the year were targeted to reduce sedimentation into rivers and improve water quality and dry season flows. Cumulatively, structural interventions that include 583.5 Km of terraces, 298 Km of riparian lands, 45.9 Km of dirt road shoulders, 72,890 hectares of land under SLM, 14,584 water pans, 3.4 million tree seedlings planted among others have shown evidence of reduced sedimentation and increased river flows (measured mainly as reduced turbidity) in the water flowing into Nairobi city treatment plants at Ng’ethu and Sasumua. These improvements have impacting treatment costs and shut-down time positively by reducing the amount of time wasted as water goes through the clarifiers.</p> <ul style="list-style-type: none"> • Maintaining Regular Flows of Water Throughout the Year <p>The various activities initiated with smallholder farmers as mentioned above are improving watershed hydrological response to rainfall, increasing in-situ and ex-situ water retention and storage in farmlands, and therefore cutting down water abstractions from the streams in Upper Tana, which improves the flows during the dry season. For instance, Kimakia and Kiama, the two main rivers feeding the Ndakaini dam registered a 12.4% increase in 2019 against the flows in 2018 and a 3% increase in 2020 against the flows in 2019.</p>

	<p>Rainwater collected from surface runoff either in retention ditches, terraces and water pans will flow into the rivers after the rains have stopped.</p> <p>To track these changes, the project in partnership with WRA upgraded 33 river monitoring stations located in major rivers with automated equipment that records water levels every 30 minutes. Seven of the stations were upgraded to telemetry to relay data at a user-defined interval. The data, received at the Nairobi Water Company's office, is assisting in tracking water quality and quantity and informing on chemical usage resulting in efficiency and great savings.</p> <ul style="list-style-type: none"> Enhancing Ecosystem Services The project contribution to enhance provisions of ecosystem services, has been achieved by rewarding major contributors to the ecosystems' benefits and enhancing food security amongst rural households, all contributing to the project goals. A reward system for ecosystem services was designed for the major achievers in the project after consultation with potential beneficiaries on their preferences. Rewards in the form of high-value fruit tree grafted seedlings, beehives for installing in riparian areas, biogas digesters and drip irrigation kits have been rolled out through a cost-sharing approach. The project has benefited individual households, institutions like schools, and the general community from the farm, micro-catchments to watershed levels. Improving Human Wellbeing and Food Security for Upstream Local Communities As a PPP, the project has transformed the lives of community members and households who contribute to watershed conservation and improvement by creating a stakeholders' platform for the public and private sector to engage. The upstream communities benefit from SLM activities supported with funds from public and private sector stakeholders while the downstream stakeholders benefit from improved environmental services, especially water. To date, the corporate sector has provided over USD 5 million and the public sector over USD20 million cash and co-financing contributions to finance project activities. <p>Some of the early results include awarding 8,500 coffee farmers with Rainforest Alliance certification, which also reports a 40% rise in coffee cherry yields. Testimonies of farmers turned millionaires from tree nursery enterprises and horticulture (over 10), households who have doubled their food production, and potential income of over USD13.8 from the sale of Avocado fruits in the next three years, climbing to USD 69 million by 10th year.</p>
<p><i>Recommendations to improve DO</i></p>	<p>The Trust will invest more time to cultivate and mobilize more resources from the private sector for endowment and public sector and especially to finance annual activities. As a public-private partnership (PPP initiative) the Trust needs to initiate discussions with the government on how it can access public sector financing, especially from conservation levies and water tariffs already being levied on water users. In addition, more strategic engagements to lobbying policy makers and participate in policy dialogues targeted at channeling funds generated from conservation levies or tariffs, towards water fund activities.</p> <p>For partnerships with government-mandated agencies e.g., WRA, NCWSC, and NMK, the Trust will initiate structured discussion for budget allocations within host institutions for the maintenance of equipment and technology installed with project support. In addition, support to monitoring and data analysis to continue feeding the ICT-based decision support tools established.</p> <p>To capture and report more comprehensively on the project impacts, a Terminal Evaluation (TE) will be carried out before end of 2021 (project completion). The evaluation will be guided by GEF procedures and undertaken by an independent consultant. IFAD will prepare the ToRs and recruit the consultant. TNC will facilitate the evaluation.</p>
<p>Risk level</p> <p><i>List key risks and measures implemented to resolve it</i></p>	<ul style="list-style-type: none"> Covid-19 impacts – Restrictions for travels, in-person meetings, and field activities including sourcing, supply, and distribution of conservation materials. The prohibition of public meetings limited opportunities for farmers' meetings and training opportunities. The project adopted approaches that reduced social gatherings while providing opportunities for business continuity. Meetings, workshops, and training for staff and partners were delivered through online virtual platforms (Zoom, Microsoft Teams, etc.) and for farmers through the SMS platform. The SMS platform was innovatively deployed

	<p>to support farmers' needs aggregation and inputs supply, extension messaging, continuous monitoring, and targeted surveys for project reporting.</p> <ul style="list-style-type: none"> • Climate-related risks of droughts, floods, and/or other weather incidents - The project area is primarily a farming region where farmers are prone to climate-related shocks and risks, especially due to their rain-dependent agriculture. Building resilience and adaptation strategies amongst the farming community is therefore key for the sustainability of the watershed conservation initiatives. The project, therefore, integrated climate-smart agricultural practices, as well as socio-economic coping mechanisms, including empowerment of marginalized groups and broader livelihood options. These include rainwater harvesting (Water pans), terraces, grass strips, agroforestry as well as riparian protection to mitigate and reduce impacts of soil erosion, and rainfall variability and improve farm productivity, diversification of cropping cycles through irrigation, the introduction of appropriate tree species, fruit trees, fodder, and other grass germplasm and husbandry training for the farmers. The measures address the risk of increased surface erosion due to a potential increase in rainfall and intensified agricultural production. Other coping mechanisms introduced include innovations and technologies such as extension and market information sharing through mobile phones platform. • Weak capacities of devolved structures to manage the implementation of activities - The Trust established institutional and structured engagement with County governments through MOU and joint work plans. This provided a coherent framework for leveraging staff capacities, project activities, and co-financing. A county advisory committee (CAC) was set up as a linchpin for the project, counties, and government agencies with mandates on sectors involved with project activities. An innovative staff secondment program was established with counties, implementation grants with local NGOs, and contracts for services to local service providers. The project integrated targeted capacity development as demanded by the partners to strengthen their delivery in the project. • Ongoing devolution process - The project engaged both levels of Government – Ministry of environmental and Forestry at the national level, the four Counties, and lead agencies at the project steering committee (PSC) level and in Trust governance levels. This includes, but not be limited to KWS, KFS, NEMA, NCWSC, KENGEN, and WRA. To operationalize the joint approach, the project adopted MOUs, joint work plans, staff secondment (CEAs), CAC, Focal Area Teams (FAT) for a seamless and coordinated implementation.
<p><i>Recommendations to reduce the risk level</i></p>	<ol style="list-style-type: none"> i. Vigilance and continuous analysis and synthesis of the evolving COVID-19 situation and government guidelines to inform the pace and diversity of approaches the project will adopt to keep the field activities going and supporting implementing partners and farmers. In addition, the project will work collaboratively with the government at national and county levels to leverage priorities aligned to mitigate the impacts of COVID-19 in advancing the project goal and objectives. ii. Leverage the information and Communication Technology platforms. The project will continue its strategic engagement and linkages with other agencies to access weather-related information and continuously relay such information and advice to farmers and partners through the SMS platform and other fora. iii. Strengthen institutional partnerships and continuously align priorities of the Fund with those of national and county governments as well as lead agencies with a mandate in the watershed for leveraged human, technical and financial capacities. The PPP framework provides a strong platform to sustainably build on these leverages for sustainability. iv. The Trust leadership and its key stakeholders, guided by its 5 years' strategic plan, will develop a messaging strategy to position the Water fund during these pandemic times and beyond as a priority vehicle for corporates and individual's participation in coordinated short and long-term upper Tana watershed conservation to achieve water security for the capital city, Nairobi and social wellbeing of upstream communities. Moreover, position and communicate the alignment of water fund model as a scalable response to current and future shocks like COVID –19 and related disruptions in the health and livelihoods of households and communities in Kenya and the region.
<p>GEF OFP comments</p>	<p>The Development Objectives of the Project have been met to a satisfactory level. However, the matter around Green House Gas Emissions have not been quantified.</p> <p>The lessons learnt informed the formulation of an upscale project in GEF 7 in the Eldoret-Iten Water Fund</p> <p>The Project was the first Water Fund in Africa, and through the experience of the Project, other Water Funds have been started elsewhere in Africa</p>

	<p>The selling point of the Project of mobilizing resources from the private sector has not been met and the target has had to be revised downwards, which is a negative development</p> <p>Positive hydrological regulation has been achieved with respect to increased flows and improved quality through reduced sedimentation. However, evidence-based data needs to be obtained downstream in the water utility providers with respect to treatment costs and increased supply to the citizens</p> <p>Food security has been enhanced due to the support to the communities especially small-scale irrigation to grow off season crops</p>
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F. MEASURING FOR RESULTS <i>As defined in the Annual Work Plan (AWP)</i>							
Main indicators	Target 2019/2020 AWP	Results 2019/2020	Target 2020/2021 AWP	Results 2020/2021	PDR Target & (achieved)	%PDR target	Comments/Remarks
Component 1: Institutionalization of Water Fund Management Platform							
Subcomponent 1.1. Water Fund Management Platform Strengthened							
No of meetings (BOT, BOM)	7	6	6	6	25 (32)	128	
No of meetings (PSC)	3	3	2	1	5 (7)	140	
No of meetings - CAC	4	4	4	5	15 (16)	107	
GEF seed capital to endowment						100	
Design and test monitoring tool			3	3	4 (5)	125	
Communication strategy					1 (1)	70	To be included with the Trust's Strategic Plan
Facilitate field Monitoring and evaluation activities	8	4	6	6	(16)	–	No PDR target
Develop a Return on Investment (Economic Monitoring Tool)			1	2	1 (2)	200	
Subcomponent 1.2. Incentives to support agriculture & Food value chain							
Water Fund PES Mechanism			1	1	6 (6)	100	
Needs/expectations assessment					1 (1)	100	
Finalization of the Trust tax exemption processing and granting	1	0.6	1	0.9	0.9	0.9	Tax exemption re-applied with KRA
Finalization and adoption by BOT of Water Fund endowment account operational policies and procedures	3	2	5	4	(4)	–	HR policy and manual; Governance policy and manual; Finance policy and manual; Operations policy and Manual and Investments policy
Resource Mobilization campaigns and events to cultivate sponsors and convert gifts	4	2	10	12	(19)	–	
Endowment Fund Capitalization	2,000,000	300,000	2,000,000	2,401,719	7,500,000 (2,401,719)	32	

Developing Communication and outreach materials	2	2	3	5	(10)	–	
Develop a strategy for Incentives for Environmental Services (IES) - Biogas	1	1			(1)	–	
Subcomponent 1.3. M&E							
No. of visits – technical committee	4	4		3	10 (12)	120	
Medium Term Review (MTR) by IFAD	1	1			1 (1)	100	
Component 2: Improved upper Tana catchment ecosystem supporting livelihoods & economic development							
Subcomponent 2.1. increased land area under INRM, SLM							
No. of households with Water Pans	3,640	1,405	2,000	1,767	12300 (14584)	119	Another 400 water pans excavated to be lined in July and August 2021
No. of households with drip kits	1,500	56	100	164	2300 (418)	18	Farmers opted for larger sizes than provided for at PDR.
No. of communal water pans	5	2	2	1	10 (10)	100	Counties prioritized boreholes and gravity water systems to meet households water demands. 5 boreholes were drilled by Nyandarua County in FY21 and 1 communal water pan
No. of trees planted	450,000	663,047	220,000	826,580	900,000 (3,433,961)	382	Target exceeded due to direct funding to interventions (agroforestry)
No. of tree nurseries capacitated	10	6	3	3	3 (15)	500	project targeted 3- more demand and scaling resulted to more for sustainability
Initial carbon assessment			1	1	1 (1)	100	
Hectares of rehabilitated public forests	45	68	20	95	3 (4)	133	4 forest sites in Gatara, Kimakia, Zuti, Ragia
No. of KM of riparian land protected	75	27	200	104	200 (298.6)	149.3	
No. of Mapping reports of freshwater wetlands			3	5	(5)	–	
No. of wetlands BD atlas					1 (.8)	80	To be completed in August
No. of NMK Databases developed			1	1	1 (1)	100	
No. of sites assessed (food & feed)	3	3		36	10 (36)	360	36 BCG permanent monitoring sites established
No. of KM of rural roads shoulders improved	25	7	15	22.9	30 (45.9)	153	

No. of quarry committees established	5	5	3	3	5 (9)	180	
No. of guidelines for rural roads construction	4	2			(4)	–	
Biogas	100	102			100 (115)	115	
Component/Outcome 3: Robust Knowledge Management and Learning systems implemented							
Subcomponent 3.1. Institutional Capacity Building							
No. of water quality database established	0.5	0.5	1	1	1 (1)	100	
No. of monitoring stations upgraded (RGS)	26	28	28	30	26 (33)	127	
No. of watersheds assessed with LDSF					5 (5)	100	
No. of scholarships granted			14	14	15 (15)	100	Finalization of 14 MSc thesis
Establish LDSF Dashboards for Counties	4	2			(4)	–	Delayed by Covid. Get commitment from ICRAF on supporting counties dashboards
Subcomponent 3.2. Framework for M&E Resilience & Socio-Economic Evaluation							
No. of surveys (MPAT)	1	0.33	1	1	3 (2)	67	merged MPAT at Medium-term with end-term
Establish DHIS2 M&E System	1	1	1	1	(2)	100	
Subcomponent 3.3 Knowledge Management & sharing of lessons learnt							
No. of national information centres established (NMK)	1	1	1	1	1 (1)	100	
No. of County information centres established (Sagana)	1	1	1	1	1 (1)	100	
No. of schools with awareness programmes	10	10	10	22	50 (92)	184	
No. of publications documented and distributed	2	2	1	5	(8)	100	
No. international, regional and national meetings	6	11	4	6	6 (24)	100	
No. of other water funds established in the region					2 (2)	100	
Establish Information Center at MENR					1	100	County level information center linked to the national one at the NMK shared with ME&F
Peer Review Workshop and Awareness raising on UTNWF Lessons Learnt	4	2	2	6	(9)	100	

Documentation and Distribution of UTNWF lessons learnt			1	5	6 (10)	400	
Nairobi 2020 Water Funds congress – Road to Senegal	1	0.25	1		(1)	100	
Knowledge Management Seminar and Exchange visit		2		10	(12)	100	
Training of Project staff and partners	3	3		7	(10)	100	
Component 4: Project Management							
No. of meetings (inception Launch)					1(1)	100	
No. of meetings held (PMU)	40	38		39	(152)	100	
No. of monitoring visits	4	4		7	(20)	100	
No. of audits done (external)	2	2	2		5(6)	120	Audits for FY21 pipelined for July-August 2021
No. of National days marked	3	3		1	(4)		
No. of learning and exchange visits	1	1		5	(6)		
No. of social media posts	54	68			138		
No. of grant acknowledgments and launches	3	2	3	3	(5)		