Republic of Kenya

FY2023 Ex-Post Evaluation Report of

Technical Cooperation for Development Planning Project

"Project for Enhancing Community Resilience Against Drought in Northern Kenya"[1]

External Evaluator: Yoshiko Ogawa, IC Net Limited

0. Summary

Aiming to improve pastoralist communities' resilience against droughts in Turkana and Marsabit Counties in Northern Kenya, the project strived to improve community-based[2] drought management capacity, natural resources development,[3] livestock value chains, income generation by livelihood diversification, and capacity development of government officials, and compiled a guideline to promote the use of the learning and models developed through project implementation. The project plan was consistent with the development policies of the government of Kenya, the development needs of the target areas, and Japan's development assistance policies. However, the project lacked plans to adequately translate the pilot activity results in 20 communities in the two counties into improved resilience in the counties (Project Purpose) and mitigated poverty and food crisis in Northern Kenya (Overall Goal). Thus, the project's logic was problematic in leading the activities to the objectives. Nonetheless, the project devised and considered effective methods to implement activities based on the lessons learned from past projects, gained an understanding of the current situation from preliminary surveys, and planned activity contents meeting the local needs; these show that the project planning and its approach were appropriate. Therefore, the project's relevance and coherence are high. Although not many beneficiaries attained income increase through livelihood diversification, the effects of drought resilience improvement of pastoralists in the target areas through the development of water resources and livestock markets were confirmed. The project was not necessarily effective in strengthening community organisations, developing the capacity of government officers, and sharing knowledge and experiences; however, at the time of the ex-post evaluation, some groups continued livelihood activities and the succeeding projects, county governments, and other development partners incorporated learning from the project into their activities. Therefore, as a project on technical cooperation for development planning, the effectiveness and impacts are high. Both the project cost and project period were within the plan and the

[1] The short form of the project name is 'ECoRAD1'.

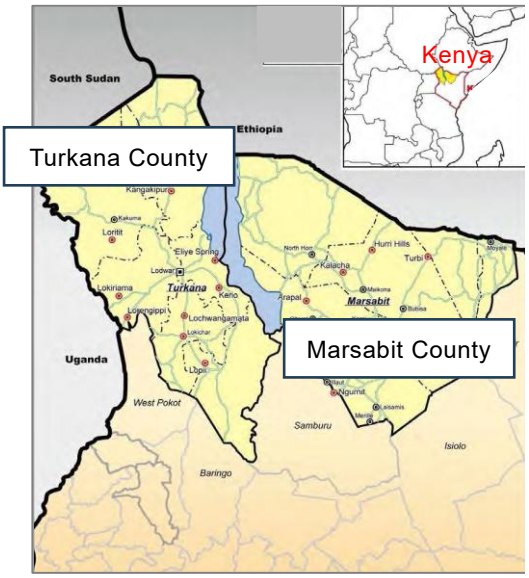
[2] Under the Constitution of Kenya, 2010, 'county, sub-county, ward, and village' were set as an administrative system for local governments. The project considered a slightly smaller area than the ward (location in the old system) in Marsabit County, and village (sub-location in the old system) in Turkana County as a unit of community when selecting target communities (ECoRAD1 Final Report, p.10). Locations were too large to promote community joint activities; therefore, a smaller administrative division, that is, sub-location, was used as a unit of target communities in Turkana County (ibid. p.13).

[3] Output 2 of the project implemented water resource development, and Output 3, improvement of livestock value chains, undertook natural resource management by a sub-project to regenerate pasture in Turkana County.

efficiency is very high. As for the sustainability of the project effects, some issues have been observed regarding institutional/organisational, technical, and financial aspects, including the status of operation and maintenance of constructed facilities, and they are not expected to be improved or resolved. Therefore, the sustainability of the project effects is moderately low.

In light of the above, this project is evaluated to be satisfactory.

1. Project Description



Sand dam (Kangakipur, Turkana County)

Livestock market (Lodwar, Turkana County)

Project Locations (source: ECoRAD1 Final Report)　Project sites (source: author)

1.1 Background

The Arid and Semi-Arid Lands (ASALs) of Northern Kenya are the areas with little rain and frequent droughts. During the drought for consecutive four years from 2008, more than 3.8 million people were affected and needed emergency assistance. In response, the government of Kenya convened the Summit on the Horn of Africa Crisis in 2011 and issued the Nairobi Declaration that emphasized the importance of building a mid- to long-term drought response system at the regional level. In this situation, the Japan International Cooperation Agency (hereinafter referred to as JICA) conducted surveys[4] to identify assistance needs and the direction of cooperation and confirmed the need for strengthening of drought resilience of the pastoralist communities in Northern Kenya. Because it was the first time for JICA to implement a drought response project in Northern Kenya, and the

[4] Needs Assessment on Drought Crisis in East Africa. (2011), Data Collection Survey on Drought Response in Northern Kenya. (2011–2012).

drought-induced emergency required a quick start of the project, this project was planned as technical cooperation for development planning, and its overall goal, project purpose, outputs, and activities were specified in the Record of Discussions (R/D). Although the project was technical cooperation for development planning, the project did not aim to implement a feasibility study or develop a master plan. Instead, it aimed to develop a resilience improvement model, strengthen the capacity of relevant government officers, and share knowledge and experiences through pilot activities.

1.2 Project Outline

Overall Goal[5]		Poverty and food insecurity induced by the drought is mitigated in Northern Kenya.
Project Purpose		The pastoralists' communities' resilience to drought is enhanced in Turkana and Marsabit County.
Outputs	Output 1	Capacity of community based drought management is improved in targeted communities.*
	Output 2	Sustainable natural resource management is realized in targeted communities.
	Output 3	Livestock value chain is improved in targeted communities.
	Output 4	Diversification of livelihoods is promoted in targeted communities.
	Output 5	Capacity of government officers to enhance the pastoralists' resilience to drought is improved.
	Output 6	The guideline for enhancing the communities' resilience to drought is established.
Total cost (Japanese Side)		1,197 million yen (JPY)
Period of Cooperation		February 2012–October 2015 (Period of extension: February 2015–October 2015)
Target Area		20 pilot communities in Turkana and Marsabit Counties
Implementing Agency[6]		Ministry of State for Development of Northern Kenya and

[5] Because the ex-ante evaluation report was not officially published, the project outline described in R/D (signed on 6 January 2012) is taken as the final version, and the overall goal, project purpose, and outputs in this table are based on the description in R/D. Although the evaluator obtained the ex-ante evaluation report from JICA archives, it is not clear that the report is the final version of the ex-ante evaluation report. When the information from the ex-ante evaluation report is used, this report clearly indicates the ex-ante evaluation report as an information source.

[6] The information is based on the ex-ante evaluation report. There is no description of an implementing agency in R/D.

	Other Arid Lands,[7] National Drought Management Authority (NDMA)
Other Relevant Agencies/ Organisations	Ministries in charge of water resources, agriculture, and livestock, and County Offices of NDMA in Turkana and Marsabit Counties
Consultant in Japan	Nippon Koei Co., Ltd.
Related Projects	'Needs Assessment on Drought Crisis in East Africa' (August 2011) 'Data Collection Survey on Drought Responses in Northern Kenya' (October 2011–January 2012) 'Project on the Development of the National Water Master Plan 2030' (Technical Cooperation for Development Planning) (October 2010–June 2013) 'Project on Enhancing Community Resilience against Drought through Sustainable Natural Resources Management and Livelihood Diversification' (ECoRAD2) (Technical Assistance) (February 2017–March 2022)

*Target communities

County	Sub-County	Target Community
Marsabit	Marsabit Central	Dirib Gombo, Dakabaricha/Jirime, Gar Qarsa
	Laisamis	Korr, Arapal, Ngurnit
	North Horr	Turbi, Kalacha, Hurry Hills
Turkana	Turkana North	Milimatatu, Kangakipur
	Turkana West	Loritit, Lokichoggio
	Loima	Lokiriama, Lorengippi
	Turkana Central	Eliye, Kerio
	Turkana South	Lochwaangikamatak, Lokichar, Lopii

(For the location of each community, see the map of the target communities in Annex 1)

1.3 Outline of the Terminal Evaluation

No terminal evaluation was conducted because the project was a technical cooperation for development planning.

2. Outline of the Evaluation Study

2.1 External Evaluator

Yoshiko Ogawa, IC Net Limited

[7] At the time of the ex-post evaluation, the Ministry of East African Community, ASALs and Regional Development was in charge.

2.2 Duration of Evaluation Study

This ex-post evaluation study was conducted with the following schedule.

Duration of the Study: October 2023–February 2025

Duration of the Field Study: 1–18 May 2024 and 15–27 August 2024

2.3 Constraints During the Evaluation Study

① Absence of Output Indicators

No project design matrix was developed because the project was technical cooperation for development planning. Moreover, output indicators were not set for the project throughout the period from project planning to implementation; thus, supplementary indicators (hereinafter referred to as 'proposed indicators') were proposed and set at the time of the ex-post evaluation. Given that it was not easy to retrospectively set quantitative indicators for each activity at the time of the ex-post evaluation without any possibility of being subjective, and that the indicators needed to cater to each activity of the outputs with a wide variety, indicators were developed to make comprehensive judgments based on qualitative information. Efforts were made to make objective judgments based on obtained information; however, the judgments based on qualitative information inevitably included subjective elements to some extent.

② Constraints of the Timing of the Ex-Post Evaluation

When the ex-post evaluation was conducted, eight years had already passed since the end of the project in October 2015. As a result, many government officers were transferred to other duty stations, and sufficient information was not obtained from officers involved in the project. It was also difficult to locate community people and groups supported by the project. Furthermore, the memories of the informants became vague, which inevitably affected the quality and quantity of the information. Additionally, the government officers remember the activities and outputs of the succeeding project[8] more clearly and tended to confuse the activities and outputs of the two projects. Therefore, it took time to select and compile the outputs of the project to evaluate.

③ Movement Restrictions on the Field Study as a Safety Measure

Neither the evaluator nor the local research assistant was able to visit Marsabit County, one of the two target counties, for information collection because of security concerns, and information was collected by questionnaires sent to the government officers and telephone interviews. Owing to the remote information collection, it took long to identify local informants. Even when the informants were identified, the information collection method was limited to telephone interviews, which again limited the quality and quantity of the

[8] Project on Enhancing Community Resilience against Drought through Sustainable Natural Resources Management and Livelihood Diversification (ECoRAD2) (February 2017–March 2022)

information.

④ Constraints from the Project Plan

As described in '1.1 Background', the contents of the project plan resembled an ordinary technical assistance project. Therefore, the evaluation was conducted from the viewpoint of an ex-post evaluation of a technical assistance project. At the same time, application of the resilience model developed based on the achievements and lessons learned of the pilot activities and learning through project implementation is an important aspect for technical cooperation for development planning. Thus, in addition to the direct outcomes of the project activities, the evaluation focused on whether the drought resilience model was used during the period from the end of the project to the time of the ex-post evaluation.

3. Results of the Evaluation (Overall Rating: B[9])

3.1 Relevance/Coherence (Rating: ③[10])

3.1.1 Relevance (Rating: ③)

3.1.1.1 Consistency with the Development Plan of Kenya

The project was planned after the severe drought of four consecutive years from 2008 and drought management was a pressing issue then for the government of Kenya. In September 2011, the government of Kenya convened the 'Summit on the Horn of Africa Crisis' and issued the *Nairobi Action Plan* and the *Nairobi Declaration* that upheld the need for establishing mid- to long-term drought response mechanisms at the regional level. Subsequently, based on the recognition that short-term humanitarian assistance alone cannot provide fundamental responses, the importance of mid- to long-term enhancement of resilience against drought was emphasized at both the national and local government levels, and incorporated into many different drought policies. The *National Policy for Disaster Management 2009* also emphasizes the importance of development work including livelihood diversification, recognising the need to manage disaster risks by prevention and mitigation of disaster consequences and minimise the vulnerability toward disasters.

Around the time of the project completion, drought responses still had been a priority issue of the government of Kenya, and drought policies were developed. The *Ending Drought Emergencies Common Programme Framework 2015* and the *Second Mid-Term Plan of the Vision 2030 Sector Plan for Drought Risk Management and Ending Drought Emergencies 2013-2017* aimed to reduce vulnerability to and risks of droughts and enhance community resilience by sustainable development.

3.1.1.2 Consistency with the Development Needs of Kenya

In Northern Kenya, of which most areas are arid or semi-arid, droughts and drought-

[9] A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

[10] ④: Very High, ③: High, ②: Moderately Low, ①: Low

induced food crises occur periodically. At the time of the project planning, this situation required development work to improve resilience in line with the national policies. During the field study, it was confirmed that, before the project implementation, water shortage in the target communities was at a critical level. The project activities such as revitalisation of livestock markets as local economy hubs and livelihood diversification that brought incomes necessary to survive the hard period of droughts met the needs of the community at the time of the project planning.

In 2014, which was one year prior to the project completion, there was little rain during the rainy season of March to May; in August of the same year, part of the population of seven counties including Marsabit and Turkana fell into a food crisis.[11] Even at the time of the project completion, there were drought risks and the government recognised them. Therefore, the need for enhancing drought resilience also continued to exist.

3.1.1.3 Appropriateness of the Project Plan and Approach

The overall goal of the project is 'Poverty and food insecurity induced by the drought is mitigated in Northern Kenya', and the project purpose is 'The pastoralists' communities' resilience to drought is enhanced in Turkana and Marsabit County'. The project purpose supposes that the project effects spread widely in the two target counties at the end of the project. However, the major activities of the project were surveys in the two target counties, pilot activities in a total of 20 communities in the two counties, and the development and sharing of a guideline based on the learning from the project activities; the project plan did not include an activity to promote application of the learning and experiences in the area outside the target areas in the counties during the project implementation. Even if the effects of the project purpose in the two counties had been achieved, it would have been inconceivable that such achievement could spontaneously lead to reduced poverty and food crisis in the vast area of Northern Kenya. Thus, it is fair to state that the logic leading from the contents and scope of the activities, the project purpose, to the overall goal was problematic.

The activity implementation approach was selected based on an understanding of the current situation and lessons learned from past projects. The selection of the counties, which was based on the severity of droughts and movement restrictions resulted from the security situation at the time of planning, was appropriate. Moreover, the target areas in the counties were properly selected based on the preliminary study results. Applying the lessons learned from past projects,[12] the plan was developed based on the preliminary study results and an understanding of the natural and social environment, distribution of tribal groups, and

[11] Relief web. Kenya: Drought - 2014-2024. https://reliefweb.int/disaster/dr-2014-000131-ken (Last access: 14 October 2024)

[12] Republic of Kenya, the Programme for Community-based Flood Disaster Management to Adapt to Climate Change in the Nyando River Basin (2009) (ex-ante evaluation, p.5)

migratory routes during the normal years as well as droughts in the target areas. Effective activity implementation approaches such as experiential learning, especially study tours, were devised and examined. Considering the cultural and social aspects in the areas, the project promoted the participation of the youth and women and planned and implemented the activities with attention to the promotion of equality in participation while trying not to spoil the sense of ownership of the communities. In Marsabit County, the activities were implemented with special consideration to the tribal balance, and peace-building activities were conducted.

At the beginning, it was planned to implement activities simultaneously in the two counties although it was not possible to travel from one to the other without going through Nairobi; however, the project was implemented appropriately by staggering the start of the activities in each county and extending the total project implementation period. It can be said that an appropriate approach was taken to adjust the implementation plan with a reasonable method and inputs (see '3.3.1.3 Project Period'). As seen above, the logic connecting the activities with the project purpose and overall goal had a problem; however, the contents of the activities met the local needs. The activity approaches were mostly appropriate, and the selection of the target areas, activities, and beneficiaries was carefully considered in a creative fashion.

3.1.2 Coherence (Rating: ②)

3.1.2.1 Consistency with Japan's ODA Policy

The Country Development Assistance Databook of the Japanese government in both 2011 and 2012 regarded as major issues development in arid and semi-arid areas and responses to frequent natural disasters. Furthermore, at the time of the planning of the project, droughts in the Horn of Africa became a focus of assistance as a global issue, and JICA prioritized assistance for drought responses in Kenya in coordination with other development partners. Thus, the project was consistent with Japan's ODA policy.

3.1.2.2 Internal Coherence

Collaboration and coordination with other JICA projects were not planned and did not occur during the project implementation.

3.1.2.3 External Coherence

At the time of the project planning, some aid agencies implemented activities other than the project to improve drought resilience; however, specific collaboration and coordination were not planned. For project planning and implementation, the project worked with the European Union (EU) for information exchange and a joint workshop, and with the United Nations Educational, Scientific and Cultural Organization (UNESCO) for an underground water resources potential study in Turkana County. Nonetheless, no synergistic effects that

could contribute to achieving the objectives of the project emerged.

As indicated above, although there was a certain problem in the logic of the project planning leading from activities to the overall goal, the consistency of the project with the development policies and needs was high, and the implementation approaches were largely appropriate. There were no specific effects of collaboration and coordination with other JICA projects or external organisations, and internal and external coherence was not confirmed. Therefore, the project's relevance and coherence are high.

3.2 Effectiveness and Impacts[13] (Rating: ③)

To assess the degree of achievement of the effectiveness and impacts, the evaluation developed indicators that can be expected from the activities of the project and used such proposed indicators shown below. The area expressed as 'Northern Kenya' in the overall goal is taken to mean the two target counties in line with the project activities, and the target area in the project purpose is read as the target communities in the two counties in the evaluation.

Table 1: Proposed Indicators for Overall Goal, Project Purpose and Outputs

Overall Goal: Poverty and food insecurity induced by the drought is mitigated in Northern Kenya. ①The guideline and models developed by the project and achievements and learning of the project are applied by government officers of the target counties and development partners for planning and implementing activities for resilience improvement. ②The capacity of the communities strengthened by the project and constructed facilities are used by the community people during droughts (focus on management of organisations such as committees, continued businesses, and management of facilities).
Project Purpose: The pastoralists' communities' resilience to drought is enhanced in Turkana and Marsabit County. ①Community people's incomes become stable and increase through sustainable water resource management, livestock trade, and small businesses; thereby contributing to improving the resilience of target pastoralists. ②The capacity of government officers to improve community-based drought resilience is improved. ③The effects of pilot activities to improve drought resilience are verified and shared with the stakeholders in Turkana and Marsabit Counties.
Output 1: Capacity of community based drought management is improved in targeted communities. ①The activities expected to contribute to achievement of the output were fully considered and implemented in the target communities (confirmation of activity contents and beneficiary status). ②As a result of the activities, the capacity of the Drought Management Committees (DMCs) regarding resilience improvement was strengthened (focus on activity status of DMCs and fostered autonomy).
Output 2: Sustainable natural resource management is realized in targeted communities.

[13] When providing the sub-rating, Effectiveness and Impacts are to be considered together.

①The activities expected to contribute to achievement of the output were fully considered and implemented (confirmation of activity contents and beneficiary status). ②As a result of the activities, the capacity of water resource management that contributed to improvement of resilience was enhanced (focus on the increase in and benefit of available water resources and pastures and establishment of managing organisations).
Output 3: Livestock value chain is improved in targeted communities. ①The activities expected to contribute to the achievement of the output were fully considered and implemented targeting the Livestock Market Associations (LMAs) (confirmation of activity contents and beneficiary status). ②As a result of the activities, the capacity of LMAs that contributes to improvement of resilience was strengthened (focus on revitalization of markets, increase in revenue).
Output 4: Diversification of livelihoods is promoted in targeted communities. ①The activities expected to contribute to diversification of the livelihood of the target community people were fully considered and implemented (confirmation of activity contents and beneficiary status). ②As a result of the activities, capacity development and livelihood diversification that were expected to contribute to improved resilience were facilitated (focus on income increase, technical skills acquisition, group management status).
Output 5: Capacity of government officers to enhance the communities' resilience to drought is improved. ①The activities expected to contribute to the capacity improvement of government officers were fully considered and implemented (confirmation of activity implementation status). ②As a result of the activities, the capacity of the government officers in charge of relevant areas such as water resources and livestock to actively work on resilience improvement was enhanced (focus on autonomy and capacity development of the beneficiaries).
Output 6: The guideline for enhancing the communities' resilience to drought is established. ①The guideline was developed and shared with the stakeholders.

3.2.1 Effectiveness

3.2.1.1 Achievement of the Project Purpose

(1) Proposed Indicator① for the Project Purpose: Achievement Status of 'Improved Resilience of Pastoralists'

The project achieved the following outputs for improving the resilience of target pastoralists by supporting various pilot activities such as water resource development (new construction and rehabilitation), livestock value chains development to promote trade in livestock markets, and livelihood diversification.

[Output 1-related results] DMCs were organized and community action plans (CAPs) were developed. Awareness raising activities were conducted and the output was mostly achieved.

- When selecting pilot activities, the project organized and trained DMCs in 20 target communities using a Community-Managed Disaster Risk Reduction[14] (CMDRR)

[14] CMDRR is an approach actively promoted by the EU before and after the planning of the project. According to the project team, during the project implementation, the EU stopped using the CMDRR approach because the approach did not produce significant outcomes. Around 2011, the EU and NGOs published several reports on

approach. In the process, each community developed a CAP and selected activities with high priority to implement as a pilot activity (see Annex 2 for the status of each activity at the end of the project). DMCs conducted awareness raising on droughts for community people and shared their learning from the training.

[Output 2-related results] Although there remained a problem in improving the water resource management capacity of the Water Users Associations (WUAs), the project significantly contributed to improving the resilience and achieving the project purpose.

- In areas where priority for water resource development had been identified, water resources such as water pans and boreholes were constructed or rehabilitated. It is reported that, as a result, at a minimum, approximately more than 18,000 people and 230,000 livestock benefitted. Interviews with the community people during the field study confirmed that the installation of water resources indispensable for daily life and herding contributed to improving the resilience of the people in the target areas. For water resource management, WUAs were organised and trained. Among them, there was a good practice in which primary school classrooms were constructed using water user fees saved after making a borehole solar-powered (Shurr, Marsabit County). However, in general, even during the project, most WUAs had difficulty in collecting water user fees from community people. The project trained WUAs on desilting and simple repair methods. However, no desilting and repairs were performed by WUAs until the time of the ex-post evaluation; capacity development of WUAs was insufficient.
- The project installed three solar panels in boreholes owned by LOWASCO,[15] a water supply company that had jurisdiction over urban areas of Turkana County. This measure enabled LOWASCO to save its fuel cost. The Turkana county government and LOWASCO agreed that LOWASCO would hand over the same amount of funds as those saved by the solarisation to the county government for repairing borehole handpumps. Once in the final stage of the project, LOWASCO transferred 450,000 Kenyan shillings

the achievements of CMDRR in the areas including Northern Kenya; however, as if responding to the non-use of CMDRR, no more reports were published except for being mentioned in an article published in 2017 on the website of the United Nations Food and Agriculture Organization (FAO). Three County Integrated Development Plans (CIDP) that Marsabit County has published thus far do not have a description of CMDRR. On the other hand, CIDP 2013-2017 of Turkana County has a description of CMDRR in its action plan and body, and CIDP 2023-2027 mentions it once in a table of the annex as a priority responding to international development frameworks. According to the interviews at the time of the ex-post evaluation, relevant ministries of Turkana County implemented CMDRR. NDMA said that it implemented CMDRR with the support of the United States Agency for International Development (USAID). However, its short CMDRR training ending with the development of a CAP resembled a needs assessment of a development project targeting communities, and it was insufficient for capacity development for drought management. The succeeding project (ECoRAD2) conducted a survey on DMCs' status at the beginning and decided not to adopt CMDRR because it was determined that DMCs were not functioning.

[15] LOWASCO is a short form of Lodwar Water and Sanitation Company. It is a company that provides water in Lodwar, the county capital of Turkana County.

(KES)[16] to the county government.

[Output 3-related results] Livestock value chains were improved and the output was achieved. For assistance in the development of livestock value chains centred on livestock markets, market facility construction and market management capacity development of LMAs was implemented. Livestock trade was facilitated by the use of facilities and improved market management. Furthermore, a trial activity to provide heifers (young female animals with no experience of childbirth) into livestock markets was implemented in Marsabit County, which confirmed that pastoralists had sold their animals to buy heifers brought to the markets.[17] It can be assumed that, as a result, the program had contributed to rejuvenation of livestock of pastoralists. The small-scale infrastructure constructed around the livestock markets also improved pastoralists' access to the markets. These activities seem to have facilitated livestock trades that were income-generating opportunities for pastoralists.

[Output 4-related results] Some activities achieved credible results, but the number is limited and a few issues remained.

- In the livelihood diversification activities, training was implemented on production and marketing techniques of various products and small savings. However, activities that brought income increase by the end of the project were only two activities[18] out of eight[19] implemented in the two counties (see Output 4 in the table of Annex 2) and the achievement was limited.

There were some drawbacks in activities such as organising WUAs and livelihood diversification. However, when all achievements of these activities are considered, the installation of infrastructure for water resource development benefited many people and livestock. The installation of infrastructure for livestock value chain enhancement and capacity development, and part of livelihood diversification activities achieved positive

[16] About JPY 594,900 (KES 1.00 was about JPY 1.322 at the exchange rate in April 2015), based on the exchange rate of the JICA settlement rate table 2015. https://www.jica.go.jp/Resource/announce/manual/form/consul_g/ku57pq00000kzv7m-att/rate_2015.pdf (Last access: 9 November 2024)

[17] This activity was expected to have contributed to drought resilience based on the following two points. ①The heifers sold through this program were highly reproductive whereas old or castrated animals did not contribute to reproduction. Thus, sales of old or castrated animals to buy heifers were supposed to have improved the productivity of the herds. ②According to a survey conducted by the project, many target pastoralists replied that heifers were more resistant to droughts than old or castrated animals. Therefore, it is fair to expect that an increase in the number of heifers can decrease the death rates of herds during droughts (Final Report, p.33).

[18] Resin and honey business and salt business

[19] Marsabit County: chicken merry-go-round, goat merry-go-round, resin and honey business, salt business; Turkana County: income generating activities, rain-fed agriculture, fishery, dry meat. In the target areas, many small-scale self-help groups conduct an activity called merry-go-round. For example, 10 members meet once a week and all members put KES 200 forward. One of the members receives all the money, KES 2,000. They collect money at the following meeting in the same way and another member receives KES 2,000. After one round, all members equally invest and equally receive funds. The chicken and goat production activities of the project applied this method to chicken and goat rearing. In a chicken merry-go-round, a group receives chickens and one of the members rears them. When chicks are reproduced, another member receives them. Repeating this, finally, all members can own chickens.

results. It is fair to state that, as a result, the project contributed to improving the resilience of the beneficiaries.

(2) Proposed Indicator② for the Project Purpose: Achievement Status of 'Improvement of Capacity of Government Officers to Enhance Community-Based Drought Resilience'

[Output 5-related results] Technical capacity was enhanced but the capacity to facilitate CMDRR was not sufficiently improved. The output was partially achieved.

No specific C/Ps were assigned to the project by the government. The project took an approach to capacity development of government officers through practice, in which it requested government officers of both counties to participate in the activities relevant to their work. Both the implementers and government officers acknowledge that, as a result, their technical capacity was enhanced. On the other hand, facilitation of CMDRR was sub-contracted to NGOs and government officers did not have sufficient practice. Both the implementers and government officers recognise that facilitation skills did not improve much compared to technical ones. To implement CMDRR focusing on community autonomy, facilitation and continuing support from government officers are important, and it would be necessary to enhance such skills. Thus, technical skills were enhanced but enhancement of facilitation skills of government officers was insufficient.

(3) Proposed Indicator③ for the Project Purpose: Achievement Status of 'Sharing of Verified Project Effects with Stakeholders of Both Counties'

[Output 6-related results] The guideline was developed. The output was achieved although its effects were not identified.

At the final stage of the project, the guideline was developed based on the implementation experience of the project and shared at workshops held in both counties and Nairobi. However, the participants of the workshops could not be identified, and reactions and responses of the participants were unknown.

Table 2: Achievement of Proposed Indicators for the Project Purpose

Project Purpose	Indicator	Actual
The pastoralists' communities' resilience to drought is enhanced in Turkana and Marsabit County	① Improved resilience of target pastoralists	Although many livelihood diversification activities did not achieve economic success, it can be concluded that a variety of activities of the project contributed to improving the resilience of beneficiaries.
	② Improved capacity of government officers to enhance community-based drought resilience	Although facilitation skills to promote improvement of community-based resilience were not significantly enhanced, technical skills of government officers were strengthened.
	③ Sharing the verified results of activity effects	The developed guideline was shared with government officers of both counties through

	with government officers of Turkana and Marsabit Counties	workshops.

As shown above, although some livelihood diversification activities brought about income increase, many of them did not achieve results as expected at the beginning. Capacity development of government officers was partially successful. However, the water resources that the project newly constructed or rehabilitated benefitted many people and livestock in the project's target areas. The effects of livestock market facility construction and training of LMAs were confirmed. The guideline covering the results of verification of the project activities was shared with the stakeholders in both counties, other counties in Northern Kenya, and the central government. Therefore, the project mostly achieved its project purpose, which is 'the pastoralists' communities' resilience to drought is enhanced in Turkana and Marsabit County'.

3.2.2 Impacts

(1) Status of the Continuation of the Activities at the Time of the Ex-Post Evaluation

[Output 1-related results] Organisational development of DMCs was not strong.

The activities of the project were implemented through the CMDRR approach that focused on community autonomy. Capacity development of DMCs was conducted to support community-based drought responses, and that of WUAs to manage water resources. DMCs were expected to lead community drought responses; however, among DMCs in 20 communities supported by the project, 15 DMCs were identified at the time of the ex-post evaluation, of which 13 DMCs remained active. According to the interviews with five DMCs in Turkana County for details, DMCs sometimes conduct awareness raising on droughts. Nevertheless, they are close to self-help groups and do not function much in the drought response of the entire community. When asked during the interviews, DMCs remembered that they had developed a CAP, but they did not recall its contents.

[Output 2-related results] There are some management issues with WUAs, but 80% of the identified water resources are in use.

Water resource development activities were implemented in 38 sites. Among the 30 sites identified during the field study,[20] 24 were continuously used[21] (Table 3). However, issues

[20] A portion of the pilot activity sites in Turkana County were visited during the field study; however, telephone interviews were conducted for the remaining pilot activities. After identifying the stakeholders of the pilot activities through local administrators, information was collected by telephone interviews. Stakeholders of some pilot activities could not be identified.

[21] There are no outstanding common characteristics among the water resources in use in both counties. Nonetheless, as a general tendency, it is fair to state that the water pans far from residential areas of community

such as malfunctions have been increasing, and silting is an issue for all water pans in use. There is also a water pan with issues such as a collapsing bank.

The project solarised three boreholes in Marsabit County ('② Borehole solarisation' in Table 3). The status of the borehole in Shurr mentioned in '3.2.1.1 Achievement of Project Purpose' that led to the construction of primary school classrooms was not identified and, unfortunately, it is not known what happened to the good example since then. '④ Other water resource' in Table 3, rock catchment[22] and water pipeline facilities in Marsabit County were used at the time of the ex-post evaluation. Such facilities' effects were confirmed: owing to the rock catchment, community people around it became able to secure water for a longer period,[23] and water from the pipeline helped people and livestock overcome droughts.[24]

Among the handpumps of Turkana County (see 'In use' of '③ Handpump' in Table 3), all four boreholes in use at the time of the ex-post evaluation were solarised. One was solarised in 2023, but it already had a leaking from the water tank at the time of the ex-post evaluation in 2024 with no prospects for repair. Other five handpumps ('③ Handpumps' 'With an issue' in Table 3) have been used after multiple repairment, having issues of a heavy handpump or low water volume. LOWASCO's three solar panels under '⑤LOWASCO solarisation' in Table 3 are in continuous use after malfunctions and repairs. However, the handpump repair funds from LOWASCO were transferred once during the project implementation and stopped shortly after the project completion because its Managing Director was replaced. A sand dam[25] under ④ is in use although the water volume decreased because of silting.

WUAs play an important role in water resource maintenance and management. Among 40 WUAs, 33 WUAs were identified and, of these, 23 WUAs were active. These surviving WUAs have played a certain role by performing tasks such as lobbying local politicians and government to solarise their boreholes, and arranging repairs of boreholes by requesting a

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people have more difficulties in management than those near community residential areas. Two water pans in Marsabit County reported to be in continuous use are located relatively close to communities (see Dololo Dokatu and Halo Garisa on the map, Annex 1) and were said to be managed by a traditional method of Borana ethnic group. In this method, a trusted man is appointed to guide daily observance of the rules on water allocation and pasture use (Final Report, English version, p.D1-32). Although it is difficult to generalise from a limited number of examples, that the area has an established water resource management method would be one of the factors facilitating continuing use.

[22] An elongated reservoir along the slope of a rock. ECoRAD1 'Northern Kenya Drought Resilience Newsletter', September 2013 Special Issue. https://www.jica.go.jp/Resource/project/kenya/004/newsletter/ku57pq00001215d6-att/newsletter_11.pdf (Last access: 6 December 2024)

[23] A telephone interview with community people living near the rock catchment.

[24] Questionnaire response from a government officer of the Ministry of Water, Environment and Natural Resources, Marsabit County.

[25] A water resource constructed in semi-arid areas. The project rehabilitated a sand dam in Kangakipur, Turkana County (see the photo in '1. Project Description'). It dams sandy rivers through which water flows during the rainy season and prevents water evaporation by storing water and water-containing sand. See Lifeplus Foundation website (in Japanese): https://www.lifeplusfoundation.org/ja/what-are-sand-dams (Last access: 9 November 2024)

local NGO. On the other hand, all WUAs have difficulty in collecting water user fees. Managerial problems in WUAs were pointed out including the following: a doubt was expressed regarding the transparency of a WUA that has not changed its officials for a long time.[26]

Table 3: Status of Water Resource Facilities at the Time of the Ex-Post Evaluation

Water resources	In use	With an issue	Not in use	Un-known	Total
① Water pan (both counties)	3	4	3	1	11
② Borehole solarisation (Marsabit County)	2	0	0	1	3
③ Handpump (Turkana County)	4	5	3	6	18
④ Other water resources (both counties)[27]	3	0	0	0	3
⑤ LOWASCO solarisation (Turkana County)	3	0	0	0	3
Total	15	9	6	8	38

(Source: Ex-post evaluation field study and telephone interviews)

[Output 3-related results] The livestock markets continue to see the effects.

Among four livestock markets supported by the project, only one market in Marsabit County was not used. Other three markets were active and have been expanding with increasing trade volume. The facilities constructed by the project in the Kerio market in Turkana County have been repaired by the LMA themselves and used. The effects of facilities and training have been continuously demonstrated.

[Output 4-related results] There were a few good examples being continuously active; however, the impacts are limited.

Among 36 livelihood diversification groups supported by the project, the status of 24 groups was identified. Of these, 12 groups continued activity (Table 4). The status of the groups vary; some groups had stopped activities immediately after the end of the project, some continued activities for some time then stopped, and some continue activities and even expand. The groups whose active status was confirmed were goat merry-go-round, honey business, and salt business in Marsabit County, and income generating activity groups

[26] Interview with an officer of the Ministry of Water Service, Environment and Natural Resource, Turkana County.
[27] Water pipeline (Arapal) and rock catchment (Ngurnit) in Marsabit County, and sand dam (Kangakipur) in Turkana County.

(livestock trade and small businesses) of Loritit and Lochwaangikamatak in Turkana County.

Some groups were found to have started diversifying businesses. A goat merry-go-round group in Arapal (see the photo on the right), Marsabit County, has expanded its activities and started butchery. Furthermore, inspired by two active goat merry-go-round groups supported by the project in the same community, a new goat merry-go-round group started after the project's completion. The livestock trade group in Loritit, Turkana County, bought a motorbike with the group funds to start a motorbike taxi business. Of the rain-fed agriculture group in Loritit, only a part of the group members continued agriculture and applied the agricultural techniques trained by the project. It was reported that about 10 non-group member farmers in the community also applied the techniques, which shows dissemination of technology albeit at a small scale.

In a goat shed of a member of Arapal goat merry-go-round (Source: a group member, n.d., 2024)

On the other hand, a fishery group in Eliye, Turkana County, stopped activities at the end of the project because it did not receive material assistance that it had expected from the project. Among the 36 groups supported by the project, contact with 12 groups was not established; the reason may be that these groups were not active. While there were credible examples of unique expansion such as those in Arapal and Loritit, livelihood diversification activities contributed to improving the livelihood of a portion of pastoralists, and, as a whole, their impacts were limited.

Table 4: List of Livelihood Diversification Activities

County	Community	Activity	No. of supported groups	No. of groups identified	No. of groups remaining active
Marsabit	Dakabaricha	Chicken merry-go-round	6	0	NA
	Jirime	Chicken merry-go-round	2	0	NA
	Gar Qarsa	Goat merry-go-round	9	9	1
	Kalacha	Goat merry-go-round	3	3	2
	Arapal	Goat merry-go-round	2	2	2
	Ngurnit	Resin and honey business	2	2	2
	Kalacha	Salt business	1	1	1
Turkana	Loritit	Income generating activity	1	1	1
	Lokiriama	Income generating activity	2	0	NA

	Lochwaangikamatak	Income generating activity	2	2	2
	Lopii	Income generating activity	2	0	NA
	Loritit	Rain-fed agriculture	1	1	0
	Eliye	Fishery	2	2	1
	Lokiriama	Dry meat	1	1	0
Total			36	24	12

No. of supported groups: number of the groups supported by the project
No. of groups identified: number of the groups with which contacts were established at the time of the ex-post evaluation
No. of groups remaining active: number of the groups that were contacted and confirmed to be active
(Source: Final Report and field study results of the ex-post evaluation)

(2) Impacts on the Activities of Stakeholders and Development Partners

[Output 5- and 6-related results] Although no systematic application of developed capacity and learning was observed, positive impacts were identified in both counties.

It was planned that the guideline developed by the project would be used to share the learning among government officers. However, government officers interviewed were not familiar with the guideline. The usage status of the guideline and the results and effects of sharing the guideline after the workshops were not identified. Thus, it seems that the guideline was not used to share the training and learning systematically. On the other hand, it was confirmed that the project made the following positive impacts on the activities of stakeholders and development partners.

① Introduction of Solar Power Generation in Turkana County[28]

At the beginning of the project, there were only 10 small-scale solar-powered boreholes in Turkana County. Triggered by the introduction of the system by the project, it has spread rapidly. At the time of the ex-post evaluation, more than 500 boreholes had a solar-powered pumping system. Boreholes with the project's solar-powered pumping system showed its effects and the system spread following the introduction.

In fact, it was confirmed that the training provided by the project facilitated solarisation. When solar-powered pumping systems were installed by the project, five staff members of LOWASCO received training on the solar-powered pumping system, supported by the project. It was reported that this training made it possible to properly maintain the systems after installation and design new solarisation projects. When the project started, there were only two solarised boreholes out of 24 under LOWASCO, but the number increased to 22 at the time of the ex-post evaluation.

② Use of the Project Achievement by the United Nations Children's Fund (UNICEF)[29]

As a result of continued information sharing with UNICEF, advice based on the

[28] Interview with a LOWASCO staff member
[29] Interview with a UNICEF staff member

experiences of the project implementer was considered in the water supply project funded by the Korea International Cooperation Agency (KOICA) in Turkana County. UNICEF also used the results of the Groundwater Potential Study of the project in its resilience improvement project through improvement in water, sanitation and hygiene facilities. The sand dam model of the project was also adopted and 10 sand dams were constructed in Turkana County.

③ Feedlot[30] projects in Marsabit County

The feedlot introduced by the project showed its effectiveness, but it was not continued after the end of the project. Subsequently, two individuals' feedlots were supported by another development partner but did not go well and stopped because there were issues such as those of feed costs. The feedlots of the project did not survive; however, its idea and method were recognised and taken over by the Marsabit County Government as an effective livestock promotion and drought response activity. Feedlots became a county priority project at the time of the ex-post evaluation.[31] In September 2024, the county government announced the construction of feedlots in 490 wards.[32]

3.2.2.1 Achievement of the Overall Goal

As a project on technical cooperation for development planning, not only the improvement of resilience of the target communities but also the use of guideline and project models based on the learning from project implementation is important. Therefore, whether the guideline, models or learnings were used by anyone of a wide range of stakeholders such as government officers and development partners was set as an indicator (Table 1). The above-mentioned examples of utilisation by the government and development partners, such as the solar-powered pumping of LOWASCO in Turkana County, sand dams of UNICEF, and the feedlot projects in Marsabit County, were confirmed. Additionally, small-scale dissemination of technologies such as agricultural techniques in Turkana County and goat merry-go-round in Marsabit County was identified. Capacity development of stakeholders through practices was also found. Thus, the project, as a project on technical cooperation for development planning, offered learnings to the stakeholders.

Although the overall effects of livelihood diversification were limited, there are some examples in which beneficiaries gained income through livelihood diversification activities and expanded businesses. For improvement in drought resilience, contributions of DMCs and WUAs are not much but they played a certain role in water resource maintenance and

[30] Young animals or sick animals are not taken out for grazing and kept in a certain plot (feedlot) to be fed.
[31] Responses to a questionnaire and e-mail (16 December 2024) of the Director of Livestock, Ministry of Agriculture, Livestock and Fisheries, Marsabit County
[32] Star. (2024). Marsabit pastoralism project to address climate change challenges. Dated 27 September 2024. https://www.the-star.co.ke/counties/north-eastern/2024-09-27-marsabit-pastoralism-project-to-address-climate-change-challenges (Last access: 2 December 2024)

operational management by requesting borehole repairs or lobbying for borehole solarisation. When asking the community members who use water resources if the facilities and developed capacity supported by the project were useful during droughts that occurred after the project completion, it was confirmed that water resources were able to retain water for a certain period and helped survive the droughts although some water resources occasionally dried up. The development of livestock markets is thought to have provided income generation opportunities to pastoralists.

Thus, although there are some issues, the project has mostly achieved its overall goal.

Table 5: Achievement of Proposed Indicators for the Overall Goal

Overall Goal	Indicator	Actual
Poverty and food insecurity induced by the drought is mitigated in Northern Kenya	Use of the guideline, project models, and achievements and learning of the project	The use and dissemination of technology in the community and by development partners as well as the strengthened technical capacity of government officers were recognised. Thus, the project as one on technical cooperation for development planning provided learnings to stakeholders.
	Use of capacity of communities and established facilities during droughts	Although the contribution of livelihood diversification and community organisations to drought response was limited, the contribution of water resources during droughts was evident. The development of livestock markets must have provided pastoralists with the opportunity to sell livestock.

3.2.2.2 Other Positive and Negative Impacts

1) Impacts on the Environment

Although the project included the construction of some small-scale infrastructure (boreholes and water pans), it was anticipated that the construction's influence was limited. This project was classified as Category B based on the JICA Guidelines for the Confirmation of Environmental and Social Consideration (April 2010) for sensitive sectors.[33] Environmental impact assessments (EIAs) were conducted for eight facilities in Marsabit County, five facilities in Turkana County, and the Groundwater Potential Study in Turkana County. No further reports were found. According to the interviews and questionnaires, no negative impacts on the environment were found.

2) Resettlement and Land Acquisition

There was no resettlement. The land necessary for project activities including those for water pans belonged to the communities and activities were commenced after obtaining community agreement.

3) Gender Equality, Marginalised People, Social Systems and Norms, People's Well-being and Human Rights

The project actively supported the less vocal groups of people in traditional society

[33] Ex-Ante Evaluation Report

including women and youth, especially in livelihood diversification activities. It was reported that women felt empowered by the reduced burden of fetching water, income increase, experience in decision-making during the project activity, and enhanced ownership of animals. On the other hand, though women participated in WUAs, generally women took a role of treasurer and men took a leadership role, and the status of women in society and organisations has not improved.

As tribal conflicts are critical security issues for people's lives, the project carefully selected project target areas and beneficiaries considering the balance among tribal groups when implementing activities in Marsabit County. The project also conducted peace-building activities in two areas around Dirib Gombo and Arapal in Marsabit County. In the Dirib Gombo area where multiple tribes lived, events such as sports competitions were conducted. The water pan constructed in the area was used by multiple tribes in cooperation with each other at the time of the ex-post evaluation. In Arapal, an exchange program for students from 11 nearby primary schools was carried out. Mothers of the students from different tribes were still on good terms since then and they kept doing business together at the time of the ex-post evaluation. Thus, it was confirmed that the project activities had brought about inter-tribal cooperation and the effects continued.

4) Other Positive and Negative Impacts

The project implemented as one on technical cooperation for development planning with urgency did not achieve expected goals of some pilot activities; however, it brought useful learnings. The succeeding project was planned based on the learning from the project, and a model created from the practice of the succeeding project has been used in Turkana County, as described below. This model took its shape after successive trials that started by the project, and it is fair to describe it as a contribution of the project.

[Box] Expansion of an Approach for Productive Activities Based on the Learning from the Project[34]

At the time of the ex-post evaluation, the Department of Livestock, Turkana County, introduced a reseeding[35] model of the 'Project on Enhancing Community Resilience against Drought through Sustainable Natural Resources Management and Livelihood Diversification, Republic of Kenya', the succeeding project, and promoted it as a county government undertaking. This model was created through the learning from reseeding activities implemented by the project.

The reseeding activities of the project targeted groups of dozens of people and started the activities using the land of the communities to which the group members belonged. However, during the activity implementation, conflicts occurred between the group members protecting the pasture and other community members wanting to bring cattle to the pasture for grazing. Management by a group also

[34] Interview with a staff member of the Department of Livestock
[35] This activity grows grass to harvest and sell fodder and seeds.

had a problem that not all members worked with commitment, which made pasture management difficult. It became clear that it was not easy to solicit cooperation from other community members and to get all members to work responsibly. The final report of the project also noted that when there is no strong leadership, it would be more appropriate to implement reseeding activities individually.[36]

Based on the experience of the project, the succeeding project implemented reseeding with farms of 10 m^2. Because other development partners usually implemented reseeding managed by groups using a large farm of 1 to 2 acres, the staff member of the Livestock Department was surprised at the beginning but later understood that this size was easier to manage. The succeeding project also started it as a group activity, but some members dropped out over time; eventually, 10 to 20% of members with enthusiasm remained. Most successful reseeding cases under the succeeding project were individual farms managed by dedicated members, who started with a small farm and expanded it later.[37] From this experience, the staff member understood that individual farms were easy to manage and succeed, and individuals could start small and, if successful, expand their farms.

The model applied by the Livestock Department provides training targeting a large group of people. Individuals responsibly practice reseeding activity on their own land. Thus, the department implements activities combining good aspects of group and individual activities. The department applies this to beekeeping; training is given to a group, and individuals are supported with beehives.

As described above, the reseeding activity of the project did not achieve the expected results; however, the learning was taken up by the succeeding project and developed further, and used in the county government work at the time of the ex-post evaluation.

There was some inadequacy in realising achievements of livelihood diversification activities and strengthening the development capacity of county government officers using CMDRR; however, by the project's implementation, drought resilience improvement of the pastoralist communities, the project purpose, was mostly achieved. As for the overall goal, although the effect of community organisation was weak, resulting in hindrances in water resource use, most water resources were continuously used and almost all livestock markets were thriving. Although limited in number, some livelihood diversification activities were found to have continued and expanded. When almost ten years have passed after the completion of the project, continuation and expansion of the activities of the project, use of models and techniques, and positive results of peacebuilding activities were confirmed. Thus, although some issues remained, the project has mostly achieved the overall goal. The learning from the project was also used by the succeeding project, county governments, and other development partners, which is the effects of the project as a technical cooperation for development planning project.

[36] ECoRAD1 Final Report, Volume III, Annex F, p.8-11.
[37] ECoRAD2 Final Report (2022) has a similar analysis on p. 28.

Therefore, the effectiveness and impacts of the project are high.

3.3 Efficiency (Rating: ④)

3.3.1 Inputs

The actual inputs for the project are shown below.

Inputs	Plan	Actual
(1) Experts	14 Short-Term (No description on PM in R/D)	14 Short-Term (152.60 PM[38])
(2) Trainees received	Nil	Nil
(3) Equipment	Installation of water facility, construction of water pans, small-scale infrastructure (road rehabilitation, market facility), pasture management and livelihood diversification, vehicle for survey	Installation of water facility, construction of water pans, small-scale infrastructure (road rehabilitation, market facility), pasture management and livelihood diversification, vehicle for survey
Japanese Side Total Project Cost	JPY 1,200 million	JPY 1,197 million
Kenya Side Total Project Cost	1. Services of counterpart personnel 2. Office space 3. Available data (including maps and photographs) and information related to the project 4. Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the project 5. Running expenses necessary for the implementation of the project 6. Necessary facilities to JICA experts for the remittance from Japan to Kenya as well as utilisation of the funds in	1. No specific counterpart assigned. Government officers in charge of the relevant areas of activities accompanied the project team to the field. 2. Office space in Nairobi was provided. Offices in the target counties were prepared by the budget of the Japanese side. 3. Data, mainly on water resources (such as boreholes), were provided. 4. Nil 5. Nil 6. Security assistance (accompaniment of armed police)

[38] According to the project team, the first contract had 143.01 PM. After five contract amendments, the final PM was 152.60.

	connection with the implementation of the project	

* PM stands for a person-month.

3.3.1.1 Elements of Inputs

The specialisation of the dispatched experts was almost the same as that described in the R/D. The number of the experts did not change but the number of PM finally increased by 9.59 PM (see footnote 38) because of the extension of the project period described below in 3.3.1.3. Pilot activities with construction work were implemented according to the budget estimates at the time of project planning.

3.3.1.2 Project Cost

Because the total project cost of the Kenyan side is unknown, a comparison is made only about the project cost of the Japanese side. Against the planned JPY 1,200 million, the actual cost was JPY 1,197 million (99.8% of the planned cost) within the plan.

3.3.1.3 Project Period

The planned project period was from February 2012 to February 2015 (36 months). However, it was extended until October 2015 (44 months) with an eight-month increase. According to a JICA internal document, the reasons for the extension were that because of 'the delay in work process and pressure on the work caused by the occurrence of initially unexpected events', the pilot activities in Marsabit County had not finished as planned by the end of March 2013, and the commencement of pilot activities in Turkana County was considerably delayed. The factors of this delay can be organized into three: ①security, ②delay in construction, and ③issues in project implementation.

First, as for ①, there was the evacuation of the Japanese experts after the presidential election in March 2013 and the experts worked in Nairobi for about two months. Moreover, because of a worsening security situation in Marsabit County in May 2013, field activities were suspended, and the experts were unable to go back to the field for three to four months.[39] With regard to ②, in April 2013, the heaviest rain and flood in 50 years occurred and caused serious damage to the extent that one of the newly constructed water pans was half-filled with earth and sand.[40] Additionally, the lack of technical skills of local contractors of water resources, delays of the selection of local contractors and commencement of construction resulting from local business practices in Turkana County affected the process.[41] As indicated above, the influence of many external factors including

[39] Final Report (in English), p.1-2, and information from a Japanese expert (e-mail dated 5 December 2024).
[40] Information from a Japanese expert (e-mail dated 5 December 2024)
[41] The construction of five water pans in Marsabit County was significantly affected by the heavy rain in April 2013. Although the construction work was to end in April 2013, the work finished in November 2013 or March 2014.

force majeure such as security and natural disaster affected hugely the project.

Regarding ③, the JICA internal document notes that the need for 'reinforcing follow-up activities and additional work for that' arose. This seems to arise from an issue in project planning targeting two counties, Marsabit and Turkana Counties. At the time of the project planning, it was envisaged to implement activities in two counties in parallel. However, it was not possible to directly travel between the two counties; it was necessary to go back to Nairobi first to go to one county from the other.[42] To avoid spending long hours and high costs for travel, the activities were started at different times. However, it still took time to continue the activities across the two counties, which inevitably affected the plan and made its implementation difficult.

Accordingly, in October 2014, the JICA stakeholders decided on an extension of eight months by replacing the planned ending date of February 2015 with October 2015.[43] Subsequently, in February 2015, the government of Kenya and the JICA Kenya Office signed an R/D amendment to approve the extension.[44] It was December 2014 when livelihood diversification activities of both counties ended and then there remained activities such as monitoring of pilot activities, assessment of the final achievement, compiling the guideline based on the assessment, and sharing workshops in the two counties and Nairobi. Thus, it is fair to state that the extension until October 2015 was appropriate. As the need for the project period extension was agreed officially with the implementing agency, this evaluation takes the project period including the extension as the planned project period for comparison with the actual project period. Both the planned and actual project periods were from February 2012 to October 2015 (100% of planned period) and the actual period was within the plan.

As shown above, the project cost and period of the project were within the plan. Therefore, the efficiency of the project is very high.

3.4 Sustainability (Rating: ②)

3.4.1 Policy and System

For ASALs in Kenya, droughts are still a serious issue; they were seriously affected by the drought in 2022. Along with the devolution that began in 2014, county governments are supposed to plan and implement development plans including drought responses. Nonetheless, both at the national and county levels, there has been no change in the importance of drought responses and community-based approaches for resilience

[42] Between the two counties lies Lake Turkana and there is no detour to connect the counties. The distance by road from Lodwar, the capital of Turkana County, to Nairobi is about 680 km and from Marsabit it is about 480 km. https://www.distance.to/ (Last access: 5 December 2024). At the time of the ex-post evaluation, a commercial flight connected Nairobi and Lodwar but Marsabit could be reached by land only. During the project implementation, there were regular humanitarian flights between Nairobi and Marsabit.
[43] JICA internal document
[44] Final Report (English), p.1-2.

improvement, and improving resilience against drought risks is consistent with the policy of the government of Kenya at the time of the ex-post evaluation.

3.4.2 Institutional/Organisational Aspect

In Marsabit County, the Cohesion, Integration and Disaster Management Directorate[45] of the Ministry of Public Service and Administration, and in Turkana County, the Ministry of Public Services, Administration and Disaster Management oversee drought responses, and the County Disaster Risk Management Committee and Disaster Management Committee have been established respectively. In Turkana County, Disaster Management Committees have been established each at lower levels of administrative units, down to the village level. The ministries in charge of disaster management in both counties take the role of coordinators of disaster-related activities of relevant ministries such as water resources, agriculture, and livestock.

The Cohesion, Integration and Disaster Management Directorate of Marsabit County reportedly lacks personnel and there are issues of coordination among ministries. The Ministry of Public Services, Administration and Disaster Management, Turkana County, has a section with five staff members that takes charge of disaster management. The system of Disaster Management Committees supposed to cover the entire area of the county has been newly established and its function has not been well developed.

On the other hand, relevant ministries[46] work on resilience improvement through their daily activities and, as government institutions, their organisational capacity for resilience enhancement is stable. However, all the government agencies have an issue of lack of personnel. In Turkana County, the Ministry of Water Service, Environment, and Natural Resources[47] assigns three to six technical staff at each sub-county.[48] The Livestock Directorate of the Ministry of Agriculture has many volunteers but it has only 17 technical staff. There are six agricultural extension officers for the entire county. Thus, the institutions and organisations are laid out but they do not have sufficient personnel.[49]

At the community level, the WUAs and DMCs in Turkana County targeted by the project did not receive technical support from the county government. However, according to the Ministry of Water Service, Environment and Natural Resources, based on the Turkana Water Act 2019, the county government started training of community water resource operators and assessment of WUAs. The Ministry of Public Services, Administration and Disaster

[45] Marsabit County 3rd CIDP (2023–2027), p.194
[46] Ministries in charge of water resources, livestock, agriculture and disaster management of both counties are the main relevant ministries.
[47] It is the ministry in charge of water resource management in Turkana County at the time of the ex-post evaluation.
[48] An administrative unit under the county. There are seven sub-counties in Turkana County.
[49] Information on the institutions and organisational structure of the Marsabit County government was not obtained.

Management has also started review of existing community committees with a recognition that it is problematic to have many committees supported by different organisations in parallel in one community. Although both moves have just started and it is not clear what could be achieved, these may lead to strengthening community organisations.[50]

3.4.3 Technical Aspect

In the relevant government organisations, technical skills are transferred mainly through daily operations. There is a budgetary issue in conducting training and the organisations tend to depend on development partners for training assistance. Thus, systemic and regular skills transfer is not conducted. As for the skills that community people obtained, some groups and people have continued activities long after the completion of the project; among these people, productive skills has taken root. Community organisations such as DMCs and WUAs have the capacity to conduct certain activities (such as awareness raising on droughts and arrangement of repairing boreholes) albeit to a limited extent. At either the government or community level, the technical skills are likely to stay the same.

3.4.4 Financial Aspect

As for budgets and expenditures of ministries in each county, data can be obtained from the annual reports published on the website of the Office of the Controller of Budget, the Government of Kenya. The allocation of the development budget of relevant ministries (disaster, water resource, and agriculture including livestock) of Turkana County is relatively stable (see Annex 3). Those of Marsabit County vary depending on the fiscal years. The absorption rates of any ministries of both counties fluctuate and generally tend to be low. This indicates that there may be challenges in financial management including budgeting. The absorption rates are calculated against the allocated budget; however, there is often discrepancy between the allocated budget and actual allocation. The percentages of the development expenditure divided by the central government allocation (see 'expenditure to exchequer issues' in the Tables of Annex 3) are higher than absorption rates and it is not uncommon to exceed 100%. Therefore, it is assumed that there are issues in budgeting, budget allocation by the central government, and budget execution, and the financial situation is not necessarily stable.

Furthermore, there are no financial data by section within a ministry or type of projects, and accurate budget volume allocated resilience improvement is not clear. Interviews with relevant ministries of Turkana County on financial issues revealed that, for a relevant ministry, having sufficient development budget does not necessarily mean that budget for

[50] Information on the plans of the relevant ministries of Marsabit County was not obtained.

resilience improvement is secured.[51] Moreover, it was confirmed that the inclusion of the assistance from development partners into development budget was one of the reasons for the discrepancy between the data and the actual situation. According to the interviews with NDMA and relevant ministries of Turkana County, when there is assistance from development partners, the ministry involved seems to have a large budget; however, on the contrary, the budget that the ministry could use at its discretion is reduced, resulting in even lack of fuel to visit communities. The dependence on development partners is clear and many sections said that training and community assistance depend on partners' budget, or even with assistance its budget is not sufficient. Even the Livestock Directorate of the Ministry of Agriculture that stated it had no lack of budget receives about 40% of its budget from development partners. Therefore, financial stability is lacking.

3.4.5 Environmental and Social Aspect

No negative influence on the environment was found and will not be found in the future.

3.4.6 Preventative Measures to Risks

The risk of droughts cannot be perfectly prevented and avoided, and there are always such risks. The government of Kenya prioritises security, and improvement in safety and security can be expected.

3.4.7 Status of Operation and Maintenance

The facilities of the livestock markets supported by the project continued to be in use and some of them were repaired and used. As LMAs collect fees to manage the livestock markets, it seems that there will be no specific problem in management, operation and maintenance. However, among the five roads constructed to facilitate livestock trade in Turkana County, three were washed away by floods. In Marsabit County, one of the three roads was identified but its condition was poor. The Ministry of Infrastructure, Transport, and Public Works,[52] Turkana County has information on the conditions of the roads under their management and plans to repair them successively according to the budget.

The water pans and sand dam were in use but there were silting and damaged banks; they were not well maintained and managed. The problem of silting had been anticipated since the time of implementation of the project and the WUAs were trained on desilting. However,

[51] At the Ministry of Public Service, Administration and Disaster Management, the Disaster Management Directorate takes charge of drought management. However, this directorate has no development budget and uses its recurrent budget for support to community organisations.

[52] The ministry that oversees the maintenance of roads in Turkana County. It was not involved in the project. However, because it is responsible for maintaining the road rehabilitated by the project, an interview with the ministry was conducted.

no water pans supported by the project have been desilted or planned to be desilted. There are financial problems such as that large equipment is needed for desilting water pans and the cost of desilting is almost the same as the construction of a new water pan. The Ministry of Water Service, Environment and Natural Resources of Turkana County has tried to budget costs for desilting and construction of water resources according to the priorities; however, there seems to be external interference in selecting priority projects. Thus, it is hard to manage and maintain the existing water resources properly. It would be difficult to prevent the decrease in the effects of the developed water resources because of the concerns about the degradation of water resources caused by siltation and weak community organisations.

Among the boreholes installed in the communities, most of them, both with a handpump and solarised system, were continuously used even with some issues. The communities in Turkana County have repaired boreholes by registering with a handpump maintenance scheme of a local NGO or soliciting support through local leaders. However, because the community people usually lack cash, WUAs have difficulty collecting water user fees. Thus, it is not easy to secure and manage funds for maintenance and management. Unless the economic situation of the community people drastically improves, the possibility for improvement in water fee collection is low.

As indicated above, regarding the sustainability of the effects of the project, some issues have been observed in terms of the institutional/organisational, technical, financial aspects including the current status of operation and maintenance. Although some efforts have begun to address issues such as community support in Turkana County, the issues are not expected to be easily improved or resolved. Therefore, the sustainability of the project effects is moderately low.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

Aiming to improve pastoralist communities' resilience against droughts in Turkana and Marsabit Counties in Northern Kenya, the project strived to improve community-based drought management capacity, natural resources development, livestock value chains, income generation by livelihood diversification, and capacity development of government officials, and compiled a guideline expected to promote the use of the learning and models developed through project implementation. The project plan was consistent with the development policies of the government of Kenya, the development needs of the target areas, and Japan's development assistance policies. However, the project lacked plans to adequately translate the pilot activity results in 20 communities in the two counties into improved resilience in the counties (Project Purpose) and mitigated poverty and food crisis in Northern Kenya (Overall Goal). Thus, the logic was problematic in leading the activities

to the objectives. Nonetheless, the project devised and considered effective methods to implement activities based on the lessons learned from other projects in the past, gained an understanding of the current situation from preliminary surveys, and planned activity contents meeting the local needs; these show that the project planning and its approach were appropriate. Therefore, the project's relevance and coherence are high. Although not many beneficiaries attained income increase through livelihood diversification, the effects of drought resilience improvement of pastoralists in the target areas through the development of water resources and livestock markets were confirmed. The project was not necessarily effective in strengthening community organisations, developing the capacity of government officers, and sharing knowledge and experiences; however, at the time of the ex-post evaluation, some groups continued livelihood activities and the succeeding project, county governments, and other development partners incorporated learning from the project into their activities. Therefore, as a project on technical cooperation for development planning, the effectiveness and impacts are high. Both the project cost and project period were within the plan and the efficiency is very high. As for the sustainability of the project effects, some issues have been observed regarding institutional/organisational, technical, and financial aspects, including the status of operation and maintenance of constructed facilities, and they are not expected to be improved or resolved. Therefore, the sustainability of the project effects is moderately low.

In light of the above, this project is evaluated to be satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Relevant Ministries of Both County Governments

The field study of the evaluation showed a lack of the management capacity of community organisations such as WUAs and DMCs. There seem to be social and cultural issues in organising people such as a lack of leaders to oversee the entire community coming from the trait of pastoralist communities that keep moving, and difficulty in nurturing self-reliance of community organisations when many community people tend to depend on aid.[53] Nonetheless, daily maintenance and management are indispensable for the sustainability of community water resources, which necessitates organisations such as a WUA. Although longer-term assistance to strengthen organisations seems necessary, assistance and follow-up by the government on the WUAs and DMCs in Turkana County were not recognised at the time of the ex-post evaluation.

At the time of the ex-post evaluation, it seemed that a review of DMCs and WUAs in Turkana County was ongoing. After assessing the current situation, it is desirable to

[53] Interviews with the Ministry of Public Service, Administration and Disaster Management and a Japanese expert.

formulate methods to support strengthening organisations. While the situation of Marsabit County is not clear, like in Turkana County, it is recommended that the county government continue to help strengthen organisations after understanding the status of existing community committees such as WUAs through reviews.

4.2.2 Recommendations to JICA

A field study in Marsabit County is recommended so that the status of the effects of the project can be understood. Before conducting the telephone interviews of this evaluation, there was a concern that continuation of pilot activities until the time of the ex-post evaluation would be difficult because a long time had passed since the completion of the project and the chicken and goat merry-go-round activities had not achieved the expected effects at the time of project completion. However, goat merry-go-round groups were found to be still active; among them, there was an interesting success case like a group in Arapal community that had expanded its business and started butchery. The borehole solarisation activities showed cases with different trajectories of achievement and continuation of activities afterward. Among the three borehole solarisation activities, the one in Shurr, Marsabit County constructed primary school classrooms during the project period with the funds saved. However, it was reported that in December 2014 a managerial problem occurred (no contact was made during the ex-post evaluation). It was found at the time of the ex-post evaluation that one of the remaining two communities where their boreholes were solarised also faced a managerial problem while the other one was still active at the time of the ex-post evaluation and used the saved funds for community activities. These cases may offer valuable information in supporting WUA management such as success factors of each case, what triggered problems, and what solutions could have been taken. A detailed study of these cases can be expected to help obtain lessons that can be used in supporting pastoralists in not only Marsabit but ASALs in the future.

4.3 Lessons Learned

<u>Relations between self-help group activities (savings and loans) and group sustainability</u>

Based on the limited analysis of the groups of which details of their current situation were understood in this evaluation, a few common characteristics were found among the operational livelihood diversification groups that continued activities. One of such characteristics was that the livelihood diversification groups conduct savings and loan activities as a self-help group. It is highly plausible that groups with a long activity history may have strong mutual trust, work smoothly, and solve problems if any arises. Savings and loan activities seem to strengthen such trust. Not only livelihood diversification groups but also many DMCs and WUAs currently active have been conducting savings and loan

activities. There is an example of the rain-fed agriculture group in Turkana County that activities as an agriculture group stopped shortly after the completion of the project but continued savings and loan activities. On the other hand, a newly formed group such as a fishery group in Eliye, Turkana County and reseeding groups tend to stop activities at the end of the project.

The project introduced and supported savings and loan activities within groups in addition to the support for livelihood diversification activities. To continue savings and loan activities, regular meetings, contribution of funds, and repayment are necessary and the commitment of each member is tested. For community people, having funds available in emergencies such as drought helps improve resilience. Therefore, an introduction and support of self-help group activities will be effective for projects aiming to improve community resilience like this project.

5. Non-Score Criteria

5.1 Performance

5.1.1 Objective Perspective

As described in the section '5) Unintended Positive/Negative Impacts' in '3.2.2.2 Other Positive and Negative Impacts', in Turkana County, the development assistance models developed by the succeeding project have been applied to reseeding and livelihood diversification activities such as honey business, and their contributions are recognised by many government officers. Additionally, zai-pits promoted by the succeeding project, a water-saving vegetable growing technique in dry areas, were applied in a wide area of Turkana County at the time of the evaluation. These achievements were made possible by this project that tried many activities, through of which lessons learned were generated. Based on such learnings, the succeeding project devised methods to motivate community people and employed agriculture techniques that suited the local situation and needs.

What made such continuing learning possible may have been the attitudes and strong commitment toward the work of the project's Japanese experts. A local government officer commented that he was able to meet the leader of the Japanese experts anytime for consultation and discussions and expressed high appreciation for Japanese experts. The project basically had Japanese experts always staying in both counties to manage the activities. This brought many chances for face-to-face meetings, realising 'assistance with a human face' and 'assistance with a full understanding of the target areas'. It was said that this made a clear contrast with the work of other development partners in which local staff work in the field and experts stay in the field for a limited time. Additionally, that the Japanese experts were open to discussions and keen to learn from each other seems to have made close relationships of the project with the local government officers, and the officers

were able to consult and discuss issues with the Japanese experts anytime. Such relationships led to continuing learning that did not stop at the end of the project. Consequently, the development and dissemination of more appropriate techniques and methodologies were realised.

5.2 Additionality

In ASALs in Kenya with a harsh natural environment, people have suffered repeated droughts and received much humanitarian aid. Although necessary for survival, it cannot be denied that such aid fed into aid dependency. In this situation, the project strived to improve resilience through technical cooperation but not material support.

Improving resilience entails mid- to long-term improvement of the capacity to respond to droughts expected to occur in the future even in a difficult situation needing humanitarian assistance, having the characteristics similar to development assistance that aims at self-reliant and sustainable development. In the situation needing assistance of both humanitarian and development characteristics, beneficiaries tended to expect material support and supporters unwittingly took a humanitarian approach, often hampering the self-reliance and self-help of those assisted. The project, having targeted people who also needed material assistance from the humanitarian viewpoint, tried hard to nurture self-reliance without almost no direct material assistance.[54]

The efforts above can be seen in the descriptions in the final report of the project. The description of the beneficiaries' expectations toward the project activities that they welcomed technical assistance without material support shows that, at the beginning of the project, the significance of the technical assistance must have been carefully explained. However, at the end of the project, there were a certain number of comments that it would have been better with material assistance.

Nonetheless, as a few successful cases shown above, some groups thrived using technical assistance even without material support. These groups recognised the value of technical assistance and understood that they could realise benefits by themselves. Moreover, there is an example of the staff member of the Livestock Directorate appeared in the Box in '4) Other Positive and Negative Impacts', in '3.2.2.2 Other Positive and Negative Impacts', who noticed the assistance approach that starts with technical assistance and small-scale material support. A staff member of the Ministry of Water, Environment and Natural Resources, Marsabit County, mentioned, as learning from the project, the attitude to address issues with little resource.[55] While it was not easy to gain understanding in the situation where

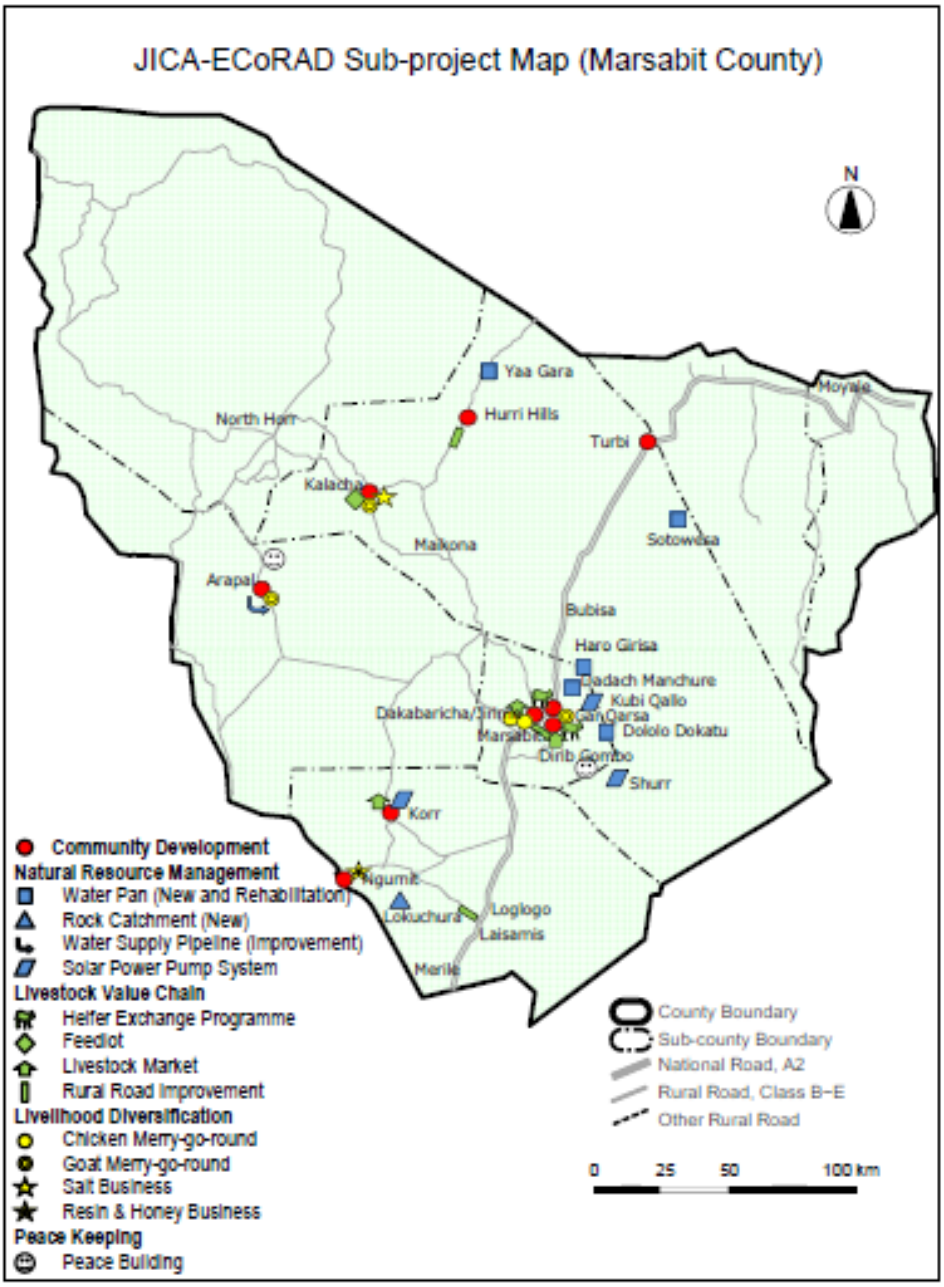
[54] The analysis in this paragraph is made by the chief advisor of the project.
[55] This is the answer of a staff member of the Ministry of Water, Environment and Natural Resources, Marsabit County, to the questionnaire.

expectations for material support were strong, the project showed the possibility to improve resilience by capacity development through technical assistance.

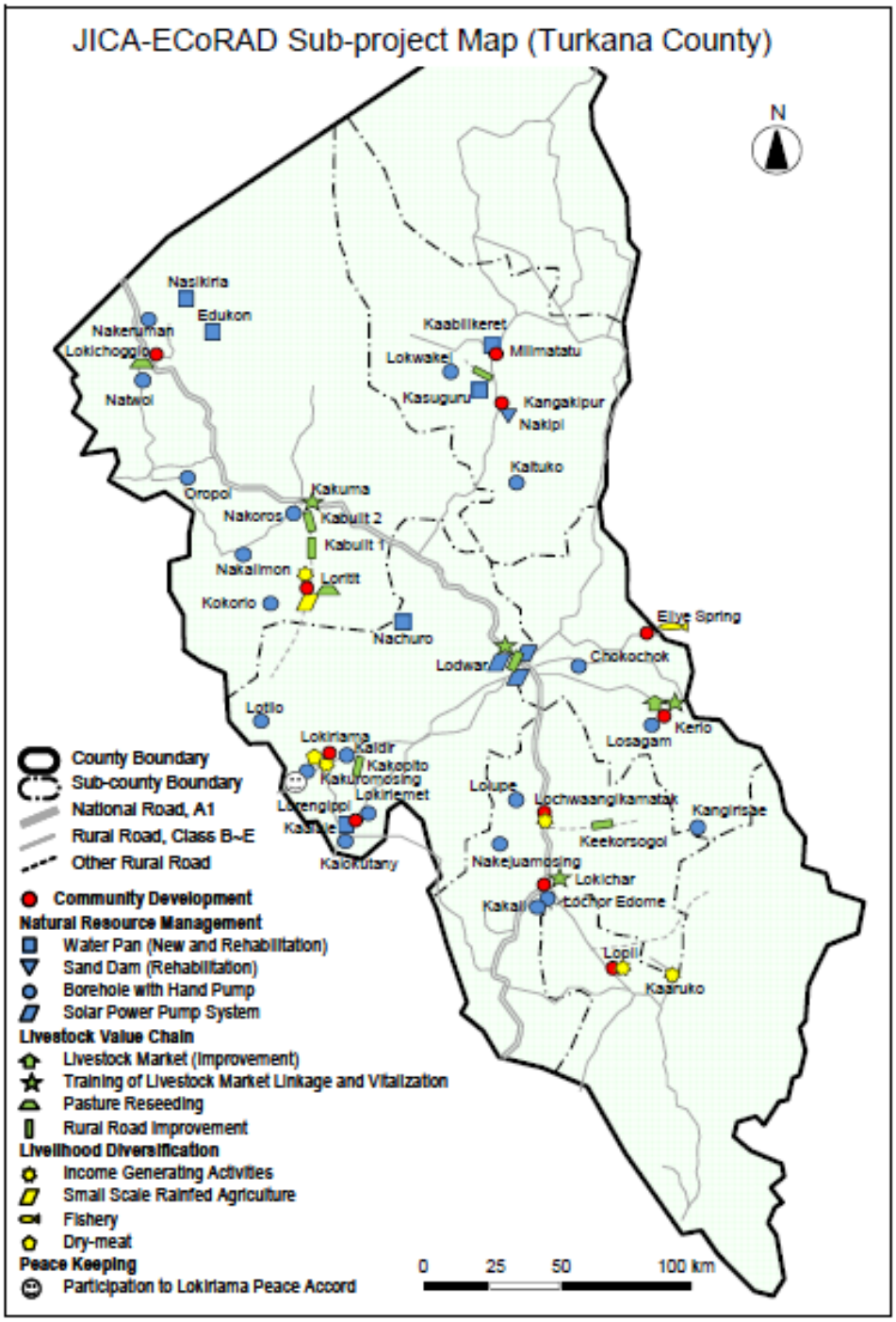
(End)

Annex 1: Maps of the Target Communities

(1) Marsabit County



(2) Turkana County



Annex 2: List of Pilot Activities (in order of outputs)

'Achievement at the end of the project' is an estimation by the external evaluator at the evaluation planning stage based on the description of the final report of the project. 'Achievement at the time of the evaluation' was the situation of the project effects at the time of the ex-post evaluation, which was assessed based on the interviews, questionnaires, and information collection through telephone interviews.

○: The intended goal was achieved, or some unintended effects were identified.

△: The intended goal was more or less achieved.

×: The intended goal was not achieved.

	Achievement at the end of the project			Achievement at the time of evaluation	
Pilot sub-projects	Activity implementation status	Capacity developed status	Rating	Status at the time of evaluation	Rating
Output 2: Capacity of community based drought management is improved in targeted communities.					
New construction and rehabilitation of water pan	Marsabit County: new construction (3), rehabilitation (2). It was estimated that 2,500 people and 41,500 animals in total used the five water pans. Areas of pasture expanded.	The project supported the establishment of WUAs. In Marsabit County, it enhanced WUA's function by integrating it with the traditional water management system of the Borana tribal group. There were concerns about the management of water pans far from the communities.	○	Among the five water pans, four are in use. Of these four water pans, two have issues and one does not function satisfactorily because of silting. All five WUAs stopped working.	△
Rehabilitation and upgrading of water pipeline	One community in Marsabit County. The project improved and extended the pipeline. It was estimated that 1,800 people and 3,500 animals benefited. Water supply per hour increased by 140%.	The project enhanced the WUA. The maintenance and management system improved, and small amount of water fees for maintenance and management started being collected. After training, WUA and local plumbers became able to perform simple repairs.	○	This sub-project is appreciated by the ministries of water, environment and natural resources, and agriculture, livestock and fisheries as a success case. The pipeline is in use. There has been neither repairment nor fee collection by WUA.	○
Rock catchment	One community in Marsabit County. 720 people used it and benefited.	The project established and enhanced the WUA. Operation and maintenance, and rules were improved.	○	It is in use. Water fee collection stopped during the drought from 2018 to 2022.	○
Introduction	Three communities in Marsabit	The WUAs were enhanced, and fuel	○	Two solar power systems are in use. The status of	○

of solar power system	County. The introduction of a solar power system proved to be effective.	costs were reduced. In Shurr, primary school classrooms were constructed with the saved water fees.		another system is not known.	
Groundwater development	The wells were drilled and handpumps were installed in 20 communities in Turkana County. It was estimated that 6,500 people and 90,000 animals benefited. Water access was improved, and pasture was expanded.	It was recommended that the WUAs register with a maintenance scheme so that repair could be requested free of charge.	○	The status of 12 sites has been confirmed. Three sites are not in use. Four wells were solar-powered by an NGO or the government. Most of the nine wells that are in use need some repair. Eight WUAs are working.	△
New construction and rehabilitation of water pan	Six communities in Turkana County. New construction (2), rehabilitation (4). 55,700 animals benefited.	WUAs were enhanced.	○	The status of one water pan is not known. Two water pans are not in use. Three water pans are used but two have issues. All have a silting issue.	△
Sand dam	One community in Turkana County. Rehabilitation of a sand dam. 5,000 animals benefited.	The project provided training on operation and maintenance.	○	It is in use. The water volume decreased compared to the time of rehabilitation. Silt has been accumulated.	○
Solar power system in water pump facilities of LOWASCO	Three sites in Turkana County. The balance of income and expenditure of LOWASCO improved.	The project enhanced the management capacity of LOWASCO.	○	Though there is some damage, the solar power systems at the three sites are functioning. The scheme to transfer saved funds to the government for repairs of wells stopped shortly after the project's end.	○
Output 3: Livestock value chain is improved in targeted communities.					
Heifer exchange	Marsabit County. It facilitated revitalization of the markets and improved the balance of owned animals. The heifers supplied by the project were bought by 750 persons at the markets.	The project enhanced the LMAs. It was proved that pastoralists were interested in buying heifers if they were available. However, after the transfer of the funds to the livestock traders, neither DMCs nor LMAs could control the use of the fund. Thus, sustainability was an issue. It largely depended on the capacity and discretion of traders.	○	Stakeholders were not identified.	Unknown

Feedlot	One site in Marsabit County. The number of direct beneficiaries is 720. By feeding with fodder grown with irrigated water from a perpetual water source, it was expected that the loss of animals during droughts reduce, and animals could be sold at high prices even during the dry season.	The project enhanced the environmental committee in charge of management of the feedlot (conflicts about the sales profit of goats and fodder occurred at the beginning. Rules were set as a response).	○	It did not go well and stopped because of the lack of water.	×
Construction and up-grading of livestock market facilities	Three sites in Marsabit County and two sites in Turkana County. It was expected that 26,000 people a year use the markets in Marsabit County and 127,750 people a year use the markets in Turkana County. Construction of shades facilitated extension of trading hours of a market, resulting in increase in trading volume.	The project enhanced the LMAs. Market days were fixed, and pricing methods were improved. The project conducted training for traders of the LMAs from Dirib Gombo, Jirime, Korr, and Kalacha in Marsabit County to introduce VICOBA.[56]	○	The Dirib Gombo market in Marsabit County stopped functioning. Other markets keep using the facilities.	○
Rural road improvement for livestock market	Three sites in Marsabit County and six sites in Turkana County. The roads became passable even during the rainy season because of the installation of permanent structure.	No capacity development was conducted.	○	The status of the two sites in Marsabit County is unknown. The structures of the four sites were lost because of demolition work or floods. Three sites are in use.	△
Livestock market linkage and vitalization	Four sites in Turkana County. At the Kerio livestock market, a livestock producer association was established in addition to the LMA to prevent exploitation by traders and secure producers' profit.	The access to market information and the capacity of LMAs were improved in the four sites in Turkana County. The number of direct beneficiaries was 28.	○	The four markets have increased trading volume. There was no person who recalls support from the project at Lokichar market.	○
Pasture establishment by reseeding	Two communities in Turkana County. The project supported the selection of reseeding plots and fencing and conducted a study tour. It provided	Though the study tour was effective, the members of Lokichoggio lost interest because of the lack of rain. The members of Loritit had an issue with the	△	Both groups conducted planting even after the project but failed. They gave up the activity during the drought in 2017.	×

[56] It is a short form of 'Village Community Banking', a group-based small-scale savings and loan activity.

	technical training.	lack of cooperation of other community members. When leadership of the local government and community leaders is lacking, it would be better to implement this activity individually, according to the report.			
Output 4: Diversification of livelihoods is promoted in targeted communities.					
Chicken merry-go-round	Two sites in Marsabit County. The project provided technical training, VICOBA training, and chickens at the beginning. There were 160 members in 8 groups.	Those who received chickens bred by the group were 20% of those who had planned to receive chickens as of December 2014.	△	No stakeholders were identified.	Unknown
Goat merry-go-round	Three sites in Marsabit County. The project provided technical training, VICOBA training, and goats at the beginning. There were 290 members in 14 groups.	Because the members were not familiar with rearing Galla goats,[57] they had difficulties. The number of those who received goats bred by the group was 31% of the planned. The importance of collaborative work and savings were highlighted.	△	Continued activities of five groups are confirmed. Especially, the Naserian group of Arapal is active. Other nine groups stopped the activity.	△
Resin and honey business	Two groups in one community of Marsabit County. The project provided technical training, training on VICOBA, market linkage enhancement, and advice. It also supported the purchase of bottles for honey sales. The number of beneficiaries is 22. No specific achievement of resin business.	The introduction of bottled honey sales succeeded and the income increased. Each member gained more income.	○	Both groups continue the honey business. They keep working and gain income.	○
Salt business	One group in one community of Marsabit County. The project provided training on business, VICOBA, and advice on marketing.	The group made KES 470,000 profit and started VICOBA with it.	○	The group continues the activity and gains income.	○

[57] Improved breed.

	The number of beneficiaries is 17.				
Income generating activities (animal trade, retailing)	Seven groups in four communities of Turkana County. The number of beneficiaries is 125. The project provided training on business and finance. Some groups were taken to a study tour.	Some animal trade groups increased trade volume and some retailing groups showed improvement in management. But there were no significant changes in profit and revenue structure.	△	Four groups in two communities could not be contacted. Three groups in two communities continue the activity (although the members of Lochwaangamatak conduct business individually, they grow vegetables for sale as a self-help group).	△
Small scale rain-fed agriculture	One group in one community of Turkana County. The number of beneficiaries is 11. The project supported six-day training on agriculture techniques and establishment of a demonstration farm.	Partly because the experiment was conducted after the main growing season, the techniques (line planting) were applied by only part of the members. Reduction of seeds to sow and labour burden was observed but there was no change in the amount of harvest. All members stated that they would try the techniques during the coming season but it is not known if they did.	△	The group exists as a self-help group. Part of the members continue agriculture. The techniques have shown some effects of use and expansion within the community.	×
Group fishery	Two groups in one community of Turkana County. The number of beneficiaries is 30. The project provided two-day training on fishing techniques, and three-day business training, and a study tour. Funding opportunities were also introduced.	The beneficiaries were motivated and 73% of them used the learned techniques. The total trade volume and fishing methods remained the same. Part of the beneficiary increased income by increasing the number of fishing, expanding the fishing areas, or diversifying buyers such as hotels. Some started commission fishing that they learned during the study tour.	△	Among the two groups, one group that had existed before the project continues group fishing, but they do not use what they learned during the training. Another group stopped the activity when the project ended.	×
Dry-meat production	One group in one community of Turkana County. The project provided three-day technical training.	Dried meat was produced mainly for self-consumption so that the meat of dead animals during droughts can be utilised. Some members tried to sell dried meat.	△	The business went well for about two years. In 2016, the leaders passed away and the group stopped the activity.	×

Annex 3: Development Budget and Absorption Rates

(1) Development budget and absorption rates of three relevant ministries, Turkana County

Fiscal year	Water, Irrigation and Agriculture			Public Service and Disaster Management			Pastoral Economy and Fisheries		
	Development budget	Development absorption rate	Expenditure to Exchequer Issues (%)	Development budget	Development absorption rate	Expenditure to Exchequer Issues (%)	Development budget	Development absorption rate	Expenditure to Exchequer Issues (%)
2014/15	970	44	58	1,026	71	87	644	50	62
2015/16	1,268	75	103	793	75	111	329	73	78
	Water, irrigation, and agriculture			Public Services, Decentralized Administration and Disaster Management			Pastoral Economy and Fisheries		
2016/17		69	67	1,229	57	67	363	79	101
	Water service, environment, and natural resources			Public Services, Decentralized Administration and Disaster Management			Agriculture, Pastoral Economy, and Fisheries		
2017/18	646	54	256	55	47	9	514	29	305
2018/19	693	42	92	156	93	659	757	25	121
2019/20	539	63	86	18	59	113	1,021	64	103
2020/21	470	57	114	16	—	—	1,047	37	94
2021/22	673	39	100	63	24	100	1,388	34	100
2022/23	781	62	90	36	—	—	1,210	59	93

Note: The Homepage of the Turkana County Government uses the "Ministry of Public Service, Administration and Disaster Management"(https://turkana.go.ke/ministry-of-public-serviceadministration-and-disaster-management/ Last access: 2 January 2025); however, the source of these data uses the 'Ministry of Public Services, Decentralized Administration and Disaster Management', and this page follows the source.

(2) Development budget and absorption rates of two relevant ministries, Marsabit County

Fiscal year	Agriculture, Livestock and Fisheries			Water, Environment and Natural Resources		
	Development budget	Development absorption rate (%)	Expenditure to Exchequer Issues (%)	Development budget	Development absorption rate (%)	Expenditure to Exchequer Issues (%)
2014/15	122	64	75	530	67	131
2015/16	144	80	82	775	77	77
2016/17	137	98	100	609	78	78
2017/18	145	99	148	636	71	96
2018/19	439	65	83	933	91	99
2019/20	509	37	64	207	86	79
2020/21	636	34	56	607	81	96
2021/22	136	63	139	308	47	78
2022/23	725	57	100	280	56	83

For both Turkana and Turkana Counties, 'Development budget' is in KES 1,000,000.

(Source: County Governments Annual Budget Implementation Review Report, FY2014/15, FY2015/16, FY2016/17, FY2017/18, FY2018/19, FY2019/2020, FY2020/21, FY2021/22, FY2022/23)