

Project Completion Report Validation

Rural Access Project

Republic of the Sudan

Date of validation by IOE: October 2019

I. Basic project data

			Approval (US\$ m)		Actual (US\$ m)	
Region	Near East and North Africa Division	Total project costs	14.96		12.27	
Country	Republic of the Sudan	IFAD financing and percentage of total	12.95	86.6%	11.28	92%
Grant number	DSF 8051-SD	Borrower (The government of The Sudan)	1.92	12.9%	0.90	0.07%
Type of project (subsector)	Infrastructure	Cofinancier 1				
Financing type	IFAD initiated	Cofinancier 2				
Lending terms	NA (DSF grant)	Cofinancier 3				
Date of approval	17 December 2009	Cofinancier 4				
Date of loan signature	04 April 2010	Beneficiaries	0.09	0.5%	0.09	0.04%
Date of effectiveness	April 2010	Other sources				
Loan amendments	Once (for extension: 2 July 2014)	Number of beneficiaries	130,000		Total: 123,801 Direct: 68,801 Indirect: 55,000	
Loan closure extensions	Once (18 months)	Project completion date	30 June 2014		31 December 2015	
Country programme managers	Tarek Ahmed (current) Mohamed Abdelgadir Hani Abdelkader Elsadani Rasha Omar	Financing closing date	31 December 2014		30 June 2016	
Regional director(s)	Khalida Bouzar (current) Nadim Khouri	Mid-term review			26 September 2012	
Project completion report reviewer	Hur Hassnain	IFAD loan disbursement at project completion (%)			94%*	
Project completion report quality control panel	Fumiko Nakai Fabrizio Felloni	Date of the project completion report			23 January 2017	

Source: President Report 2009, RAP Extension Approval Memo 2014, Project Completion Report 2017 (appendix 7).

* Disbursement rate in the currency of financing, Special Drawing Rights (SDR). In the US Dollar terms, the disbursement rate is calculated as 87 per cent. The difference in the rates would be due to fluctuation of exchange rate between SDR and USD.

II. Project outline

1. **Introduction.** The Rural Access Project (RAP) was implemented in Butana area in Eastern Sudan to improve the access of the rural population to markets and social services. The project was approved by IFAD's Executive Board on 17 December 2009 with the estimated project cost of approximately US\$15 million, including an IFAD grant of US\$12.95 million under the debt sustainability framework (DSF). The project was intended to complement the interventions of two other programmes active in the Butana area: (i) the Agriculture Revival Programme (ARP) funded by the Government of National Unity; and (ii) the IFAD-financed Butana Integrated Rural Development Project (BIRDP) under implementation since 2008.
2. The financing became effective in April 2010 and the project was originally scheduled for completion in June 2014, with grant closing on 31 December 2014. IFAD granted 18 months no cost extension for completion by December 2015 with grant closing in June 2016. The project completion report (PCR) was released in January 2017. The draft of this document (project completion report validation, PCRv) was shared with the IFAD Programme Management Department in April 2019 and comments were received in the same month. This PCRv was finalized based on the comments, as well as discussions and observations in the field during the country strategy and programme evaluation mission in September 2019.
3. **Project area.** The geographic focus of the intervention was the Butana area in Eastern Sudan where IFAD was financing the BIRDP. The project area is characterised by difficult accessibility throughout the rainy season with access to and from the main markets is very difficult for vehicles, livestock and people especially across seasonal streams.
4. **Project goal, objectives and components.** The main objective of the project was to improve the access of the rural population to markets and social services. The logical framework included three specific results: (i) Rural roads upgraded in Central Butana and regularly maintained; (ii) Communities are trained to manage road tolls and to engage in labor-based maintenance contracts; (iii) State capacity strengthened to plan, design, supervise, and maintain rural feeder roads, using the spot improvement approach.
5. The project consisted of three components:
 - *Component 1:* Physical rehabilitation and construction of rural feeder roads, with four sub components: (i) the upgrading of Sitta Arab-Es Soubagh-Husheib road; (ii) implementation of conservation works to protect the road from dendricular erosion; (iii) commissioning of studies to support activities for road development and (iv) the establishment of Community Road Fund to finance the routine and periodic maintenance of the road.
 - *Component 2:* Capacity building and institutional development, with three sub components: (i) institutional support to the Road Departments in the Ministry of Physical Planning and Public Utilities (MPPUs) of Kassala and Gadaref; (ii) training in the road departments in the MPPUs; and (iii) training of communities on the implementation of soil and water conservation works and implementation of labour-based works.
 - *Component 3:* Project management, with three sub components: (i) recruitment of the consultancy firm by the Butana Development Agency (BDA) to coordinate project activities and to provide supervision of the works and capacity building of the Road Departments of the MPPUs and to the participating communities; (ii) monitoring of the project by National Highways and Bridges Authority (NHBA); coordination with the BIRDP community based and marketing activities.
6. **Target group.** The project aimed at serving the poor and less poor communities located along the road alignment in the two localities of the central Butana area namely Butana in Gadaref State and River Atbara in Kassala State (the "project

area"). For the poor households, the project was to target them with labour intensive activities in the context of the soil and water conservation works to protect the road from gulley erosion. For the less poor households, who own vehicles, the project was to target them with awareness campaigns to encourage them to pay road and market fees, which will be used for the preventative maintenance of the road. According to the financing agreement, the total expected number of beneficiaries was 130,000 persons, equivalent to about 15,000 producer households¹ and furthermore, the project was also expected to benefit 1,700 additional women trading in the main markets serviced by the road. According to the PCR, poor households constitute 80 per cent of the rural population in Butana.

7. **Financing.** The estimated total project cost at approval was US\$14.96 million, of which US\$12.95 million was to be financed by IFAD (a DSF grant), with government contribution of US\$0.92 million as duties and taxes, and beneficiaries' contribution of US\$90,000 towards the maintenance of the road. The actual total project cost was reported as US\$12.27 million (82 per cent of the projected cost), but there are some inconsistencies in the PCR for the actual project cost (see tables 1 and 2).

Table 1
Project cost by financier (US\$ million)

<i>Financier</i>	<i>Appraisal (US\$ million)</i>	<i>Disbursements (US\$ million)</i>	<i>Per cent disbursed</i>
IFAD grant	12.96	11.28	87%*
Government contribution	1.92	0.09	47%
Beneficiaries	0.09	0.09	100%
Total	14.96	12.27	82%

Source: PCR appendix 7 (table on financial performance by financier up to December 2015) and 2009 President's Report. Any inconsistencies in percentages are due to rounding up.

* Disbursement rate in the currency of financing, Special Drawing Rights (SDR) is 94 per cent. The difference is due to fluctuation of SDR: USD exchange rates.

Table 2
Project cost by component (US\$ million)

<i>Component</i>	<i>Appraisal (US\$ million)</i>	<i>Disbursements (US\$ million)</i>	<i>Percentage of planned cost</i>
Physical rehabilitation and construction or rural roads	12.2	10.71	87%
Support to community development	2.3	2.25	97%
Programme management	0.4	0.4	100%
Total	14.9	13.36* (sum of the above)	

Source: PCR.

* The data on cost per component is mentioned only in the PCR text (paragraph 23), which are used in table above. The PCR text (paragraph 23) does not indicate the total actual project cost and the sum of the figures per component does not match the total project cost reported elsewhere, i.e. US\$12.27 million (e.g. appendix 7 of the PCR).

8. **Implementation arrangements.** Butana Development Agency (BDA) was the lead agency of the project. Established in 2007 by Presidential decree, BDA is a federal entity that coordinates interstate efforts to promote sustainable

¹ There are some inconsistencies about the number of expected beneficiaries in the project documents. The way the PCR presented the data implies that 75,000 persons were to be direct beneficiaries and 55,000 indirect (in total 130,000 people in 15,000 households). However, this segregation is not found in the design report. In fact, the design report refers to 130,000 persons as direct beneficiaries and 136,000 persons as indirect beneficiaries, in total 266,000 people (RAP design report paragraph 98). Nor can the evidence of revising (reducing) the targets be found in the project documents. It is also possible that the assumption of the household size (8.67) in the design was on the high side.

development in the Butana area. BDA carried out the training of the road departments of the MPPUs and the communities, monitoring project performance and deciding on corrective actions with the help of a consultancy firm. The MPPUs of Gedaref and Kassala States were the contracting authorities for the proposed road. The road departments in the MPPUs were responsible for adapting the road design to the field realities, certifying contractors' payments, and planning and supervising road maintenance works. The NHBA was required to monitor the project with a view to mainstreaming its approach in the Government policy and programmes for rural roads, and to replicating the approach under ARP's rural roads programme.

9. **Changes and developments during implementation.** The project design intended to complement rural roads constructed under the ARP using spot improvement approach. However, the consulting firm hired by the project changed the design of the Subagh-Sitta Arab section (74 km) to a full stretch gravel/embankment road, due to the soil conditions. This led to a one-year delay in the commencement of project activities.
10. **Intervention logic.** According to the PCR, the poor rural producers of Butana suffer most as a result of high transportation and transaction costs in the movement of agricultural products (high price of farm inputs and low farm gate prices) and limited access to basic social services such as health and education because of poor road infrastructure. Inadequate social services and limited employment and marketing opportunities primarily affect women, including pregnant women, young people and children, as evidenced in high illiteracy, mortality and malnutrition rates.
11. Project design specifically proposed to address these structural constraints for poor rural producers and vulnerable groups, including women. The project aimed to improve the socio-economic conditions of the rural population through increased rural road access to productive and social services, and to four main markets (especially during the rainy season). The interventions under RAP were designed to complement two existing projects in the Butana region: the roads constructed by the ARP through spot improvement approach and the market rehabilitation activities under the BIRD. More specifically, the project approach called for improving rural poor's access to market by constructing and upgrading the rural roads, maintaining it with the help of local communities and with a strengthened state capacity to plan, design, supervise, and maintain rural feeder roads using the spot improvement approach.
12. **Delivery of outputs.** An overview of outputs per component in the PCR² shows that there was some progress towards targets in all components of the project, but they were not fully met in most areas. The delivery of outputs was, however, particularly low in the institutional support role of the project, as presented in the table below, while details can be found in the relevant sections below.

² PCR, RIMS Annex 9.

Table 3
Data on outreach and outputs

<i>Total outreach</i>	<i>Unit</i>	<i>Cumulative</i>		
		<i>appraisal</i>	<i>Actual (2015)</i>	<i>% of appraisal</i>
Households receiving project service	Number	15 000	13 950	93%
Persons receiving project service	Male	41 250	36 866	80%
Persons receiving project service	female	33 750	31 935	95%
Persons receiving project service	Number	75 000*	68 801	91%
Institutional Support				
Govt. officials and staff trained	Male	48	19	40%
Govt. officials and staff trained	Female	16	4	25%
Govt. officials and staff trained	total	64	23	36%
Persons trained in infrastructure management	Male	15	11	75%
Persons trained in infrastructure management	Female	60	37	62%
Road / track				
Groups managing infrastructure formed strengthened	Number	21	17	81%
Groups managing infrastructure with women in leadership	Number	21	17	81%
Land under improved management practice	Ha	6 900	6 277	91%
Persons in groups managing infrastructure formed / strengthened	Male	200	196	98%
Persons in groups managing infrastructure formed / strengthened	Female	200	150	75%
Groups managing infrastructure with women in leadership	Total	400	346	87%
Road constructed	km	144	74	51%
Road operating after 3 years	Km	144	74	51%
Natural resource management				
Land under improved management practices	Ha	6 900	6 277	91%
Persons trained in natural resource management	Male	120	145	121%
Persons trained in natural resource management	Female	80	64	80%
Persons trained in natural resource management	total	200	209	105%

Source: PCR Annex 9.

* See footnote 1 about questions on the target for beneficiaries. The PCR seems to indicate that 75,000 is the target for direct beneficiaries out of the total number 130,000.

III. Review of findings

A. Core criteria

Relevance

13. **Relevance of objectives.** The project's objectives were fully aligned with the development objectives of the government of Sudan's ARP, which focuses on rural road construction. The RAP in its design and implementation addressed three key gaps in the ARP, namely: (i) spot improvement based on soil quality; (ii) capacity-building for road departments; and (iii) preventative maintenance by the community groups.

14. The project was also coherent with IFAD's policies and strategies, in particular, access by rural poor people to markets was a key IFAD strategic objective under the strategic framework 2007-2010, One of the strategic objectives of the Sudan country strategic opportunities programme (COSOP) of 2013 pointed to increase the access of poor rural households to sustainable rural finance services, markets and profitable value chains, in support of the country's development goals.³
 15. Finally and perhaps most importantly, the project was highly relevant to the needs of the Butana rural communities to have better access to markets and social services by reducing mobility constraints during the rainy season. As indicated in the design report, the project area is characterized by silty clay and black cotton soils where relatively poor drainage characteristics combined with flat topography results in prolonged periods of inundation during the rainy season and many rural communities get isolated from markets and services.
 16. **Relevance of design.** The project structure along the three components and the supported activities were relevant to meet project objectives. The road design as originally proposed was considered to be cost efficient and well adapted to the flat Butana area. The original designers intended to adopt a spot improvement and preventive maintenance approach to facilitate easy movement of vehicles and animals over small seasonal streams and *khors* [creeks] during the rainy season.
 17. Yet, the proposed approach did not take into account important issues such as soil conditions (i.e., muddy depressions) that obstructed the smooth movement of vehicles during the rainy season.⁴ As such, the Subagh-Sitta Arab stretch of road (74 km) had to be redesigned and this entailed a shift from spot improvement to stretch gravel / embankment road, which was more expensive and caused a one-year delay in the commencement of project activities. These issues could have been identified during the design/appraisal phase to construct the road in the best way possible. The delay caused by these design gaps resulted in some issues related to ensuring the sustainability (e.g., establishment of the Community Road Fund) and scaling up of the intervention (e.g., coordination with and advocacy by the NHBA and MPPUs to incorporate spot improvement approach in the government policies and programmes related to rural road infrastructure).
 18. The project design did not pay sufficient attention to identifying and addressing the institutional capacity gaps and lack of interest (of especially the key project stakeholders such as NHBA and MPPUs), in relation to their capacity and interest in taking up the innovative project components for sustainability purposes.
 19. *Logical framework and indicators.* The project logical framework comprises an overall objective, which was linked to the COSOP objective, and three specific results. There is a reasonable number of indicators including one on gender. The overall project logic is coherent. However, the overall objective given in the PCR included 'improvement in socio-economic conditions of the rural population', which was not mentioned in the original project design document. Also, no indicators were included in the logical framework around the increased coordination with the key stakeholders such as NHBA and MPPUs.
 20. Despite some weaknesses in the design, in view of the high relevance of project objectives and the vital importance of the roads for the rural communities, the PCRV rates relevance as **satisfactory (5)**, one point lower than the PCR rating.
- Effectiveness**
21. For the purpose of validating and assessing effectiveness, the objective and results stated in the financial agreement and the 2009 President's Report are considered.

³ 2016 Republic of the Sudan COSOP Results Review.

⁴ 2015 RAP PCR.

Achievements against the expected results

22. **Rural roads upgraded in Central Butana and regularly maintained:** The RAP suffered from some serious implementation delays. Overall, at the end of the project, the physical rehabilitation and construction of roads component of the RAP was only 51 per cent against the target (i.e., 74 km against the target of 144 km) as given in Table 3.
23. **Communities are trained to manage road tolls and to engage in labour-based maintenance contracts:** Community-based organizations were trained on conservation and water control works; a total of 493 terraces covering 2,450 feddans⁵ were either constructed or rehabilitated along the boundaries of the existing farms adjacent to the road. Although not planned at design, RAP broadcasted tree seeds to cover gold mining pits along the road to mitigate environmental impact for a total area of 12,000 feddans, covering about 108,000 mining pits.
24. Seedlings along terraces to enhance windbreaks were introduced by RAP and the BIRD to stabilize and protect the road against wind erosion. It was reported that at completion, 90 per cent of the cultivated land (6,277 ha) located near the targeted 22 communities along the newly constructed road stretch has been placed under improved agricultural management practices including terracing and increased use of modern inputs.
25. The Community Road Fund (CRF), that was supposed to be established as preventive maintenance arrangements, was not set up by the time of project completion.
26. **State capacity strengthened to plan, design, supervise, and maintain rural feeder roads, using the spot improvement approach:** The Butana Development Agency (BDA) supported the MPPUs with provision of vehicles and logistical equipment and about 20 days of training was provided to 16 engineers of the targeted road departments. Five MPPU engineers received training in designs, testing of materials and the adaptation of the designs and standard drawings to sites.
27. One of the significant expected result of RAP was to mainstream the spot improvement approach as a feasible alternative for construction of other feeder roads, into national policy, through closely involving the NHBA and MPPUs during the road construction and supervision. In parallel, the Butana and River Atbara localities were expected to issue decrees to establish CRF. While these institutions showed interest, no tangible steps had been taken at completion. Lack of ownership and institutional capacity prevented forging effective partnerships between key players in the sector at various levels and lasting policy and institutional impacts.

Objective – Improved access of the rural population in Central Butana to markets and social services

28. With regard to the overall project objective, the access to markets has improved because of the reduction in seasonal mobility constraints in certain areas. This change is reported in the PCR to be attributed to the construction of crossings at certain locations along water courses. However, this information is not fully supported by robust evidence to validate a claim of increased access to markets and/or how this is benefitting the rural poor households.
29. According to the PCR, project results served the needs of the beneficiaries. The RAP commissioned socio-economic study indicates that the sense of ownership of the road is high, indicating commitment to maintenance and sustainability in addition to a willingness to pay for road use. It also underlines the continued

⁵ One feddan is equivalent to 1.038 acres (0.42 ha).

relevance of completing the road as key to unlock the economic potential of Butana.

30. The PCR reports progress such as decrease in transportation time (i.e. 46 hours to 1.45 hours) and reduction in transportation cost by 40 per cent to 50 per cent. It is not clear how these data were established, but given the inaccessibility prior to the road intervention, significant reduction in transport time and cost is highly plausible, as was also noted during the field visit by the country strategy and programme evaluation mission.
31. Only 1,031 women compared to the planned 1,700 benefitted from trading in the market following the road alignments. It is however not fully clear how these 1,031 women traders were calculated in the PCR.
32. Overall, according to the PCR, the project reached 123,801 people against the total target of 130,000 people, including 68,801 people directly reached against the target of 75,000 people.⁶ Amongst the people who were reached directly, 31,935 (or 46 per cent) were females as given in Table 3.
33. Overall, the project activities were implemented with constant delays and the RAP objective was only partially achieved. Indeed, an unfinished road combined with lack of maintenance management system did not provide the expected benefits. The effectiveness of RAP is considered both in the PCR and the PCRV as **moderately unsatisfactory (3)**.

Efficiency

34. The financing agreement was signed within a reasonable timeframe, i.e. some four months after the approval, but serious delays were recorded in the implementation of the physical rehabilitation and construction of roads, the key component of the project. At the date of project completion, the PCR recorded it as only 74 km (51 per cent) against the target of 144 km as given in Table 3. This poor rate of delivery could be attributed to: (i) construction delays due to the revision in project design; and (ii) price escalation because of the delayed construction works and ineffective project management. Moreover, some results could not materialise as planned, with the early disengagement of key stakeholders, including the NHBA and MPPUs as discussed in the Effectiveness section above.
35. According to the available financial information on the status of cumulative expenditures, there were inefficiencies in the actual budget disbursement compared to projected disbursements. The overall financial execution stood at around 82 per cent of the total cost of the project (as shown in Table 1), despite a project extension granted by IFAD. This underspending could be attributed to the failure to complete the project component 1, physical rehabilitation and construction of roads, resulting in the expenditure of only 87 per cent of the planned budget for this component as given in Table 2.
36. As noted in paragraph 7, the final project cost per component was not clearly presented in the PCR. Nonetheless, from the available data, while they may not be final and precise, show that the proportion of cost for programme management was approximately 3 per cent of the total cost. This is quite low compared to other projects, but may also be explained by the nature of the investment (mostly for road construction and rehabilitation, civil works and technical assistance).
37. The economic internal rate of return for RAP at completion was calculated in the PCR to be 12 per cent against the appraisal target of 26 per cent, at a discount rate of 12 per cent.⁷

⁶ See also footnote 1 with regard to lack of clarity on the targeted number of beneficiaries.

⁷ Project Completion Report, Appendix 10.

38. Overall, the PCR shows a low level of achievement of targets during the life of the project despite an extension for 18 months. Based on the above analysis, efficiency is rated as **moderately unsatisfactory (3)**, same rating as provided by the PCR.

Rural poverty impact

39. The overall impact of the project in the logframe is stated as: "The project shall contribute to the COSOP 2009-2012 goal of empowering the rural poor to: (i) increase their food security; (ii) incomes; and (iii) resilience to shocks".
40. In 2015, a quasi-experimental impact survey was commissioned to a consultancy firm to measure and evaluate the impact of the project using difference in difference approach. The survey findings addressed poverty levels and economic mobility, household resilience, child nutritional status and women's empowerment by consulting 1,980 households in 19 control and 20 intervention villages.
41. The results of the impact survey indicated that there is improvement among the intervention household compared with the control households in the poverty indicators, and the difference-in-difference analysis showed significant impact of the project on household's welfare. The study however could not find statistically significant differences in child nutritional status and women's empowerment in the project areas compared to the counterfactual (i.e., control villages). Furthermore, given the presence of BIRD to which RAP was to be complementary, it would have been difficult to consider the impacts of RAP alone.
42. Taking into account the above limitations, the next section describes the impact of the project against four domains: household income and assets, food security and agriculture productivity, human and social capital and empowerment, institutions and policies.
43. **Household income and assets.** According to the 2014 supervision mission report, the project has contributed to poverty reduction in the targeted areas by increasing opportunities for temporary employment.
44. The 2015 impact survey findings show 50 per cent increase in average annual income of the households compared to the Mid-Term Review conducted in 2012. Forty-nine per cent households reported improved asset ownership compared to only 21 per cent in three years' time (i.e., 2012 to 2015). The impact survey also reports substantive increase in access to electronic and satellite communication technologies such as TV, mobile phones and radios compared to the project baseline. Moreover, it was reported that 33 per cent households saved part of their incomes to purchase household utilities, and 30 per cent of households had used part of their savings to purchase livestock.⁸
45. **Agricultural productivity and food security.** According to the 2015 impact survey, 8.2 per cent households experienced only one hungry season compared to 36 per cent in 2009. The survey findings further revealed 54 per cent increase in the farmers herd size and 51 per cent increase in milk production from 2010 to 2015. Although these data reveal improvement over time, there is no clear evidence in the RIMS to attribute this improvement, or reduction in the lean season, to the improvement and construction of the road.
46. According to the PCR, the RAP target group benefited from the synergies developed with BIRD, implemented in the RAP project area by the same lead executing agency, the BDA. RAP's support to establishing Soil & Water Conservation (SWC) Structures, coupled with BIRD dissemination of productive enhancing technologies (crop production technologies, water harvesting and infrastructure management), resulted in 65 per cent of the surveyed farmers from villages around the road route reporting that their agricultural production and productivity had improved, as a

⁸ 2016 RAP impact survey.

result of both expansion of cultivated land and increased sorghum yield by 20 per cent and fodder by 56 per cent.

47. **Human and social capital and empowerment:** The RAP formed and organized community groups in the project areas to adopt good practices such as natural resources management and engaged them in the design and construction of road alignment and SWC activities. According to the PCR, these efforts contribute to an enhanced sense of human security, build social capital and empower communities to work together to achieve their combined goals. The PCR further claims communities' increased ability to peacefully resolving land related disputes arising from the road construction during the life of the project.
48. Communities were heavily involved in the construction and rehabilitation of terraces as part of SWC works. Not all communities were reported to be benefitted from the roads at the time of the project completion but working together for a combined goal brought in a sense of community and social cohesion amongst the people of Butana.
49. **Institutions and policies.** According to PCR, the RAP, at the time of its completion could not mainstream the spot improvement approach into the national policy. This was expected to be done through closely involving the NHBA and MPPUs during the road construction and supervision. No tangible steps were recorded against the issuance of decrees to establish CRF in the Butana and River Atbara localities as planned. The lack of ownership and institutional capacity prevented forging effective partnerships between key players in the sector at various levels and lasting policy and institutional impacts.
50. **Overall.** Although the RAP performance was affected by low level of achievement of the main component of the project and weak sustainability as discussed later, the PCR and the 2015 impact survey shows that improved rural roads facilitated the rural population's access to markets and services and contributed to their well-being. The PCR rates the rural poverty impact as **moderately satisfactory (4)**, as in the PCR.

Sustainability of benefits

51. According to the 2009 President Report, three indicators were identified as milestones for sustainability of benefits: (i) road departments' technical capacity; (ii) a community road fund; and (iii) spot improvement approach for rural roads rather than the conventional approach to road construction.
52. The PCR speaks about some capacity building initiatives such as training workshops to build road departments' technical capacity (see paragraph 59) but there is less to report on the other two indicators. The CRF (see paragraph 56) could not be established while the key stakeholders failed to lobby the government for the spot improvement approach for rural roads (see paragraph 59) because of their disengagement with the project as per the PCR.
53. The sustainability of benefits of RAP is discussed below through three areas: social, institutional and environmental sustainability.
54. **Social sustainability.** RAP engaged communities in the design and construction of road alignment and SWC activities. The 2014 supervision mission also noted efforts towards social sustainability through the participation of communities in the identification of the road alignment and through the demonstration session on SWC activities where both genders participated.
55. The PCR reports that this also led to communities taking part in assisting in conflict resolution arising from road construction. However, the delay in construction may threaten these achievements, e.g., the sense of community to work together on SWC activities and joint efforts on the rehabilitation of roads could be affected.

56. The delay in establishing of and drafting the by-laws for CRF is reported to be affecting the sustainability.
57. **Institutional sustainability.** According to the PCR, efforts to ensure institutional sustainability were undertaken by strengthening community organisations in villages near the road alignment (community development committees). These communities have commenced work on SWC measures to protect the future passable road from erosion and floods.
58. As an integral part of the scaling up and replication process, road department staff received formal and on-the-job training to build their capacities in road planning, design, management, supervision and maintenance.
59. The MPPUs received training, considered satisfactory by management in supporting the ministries to build capacities. On-site job training proved useful in upgrading the states' engineers' supervision and monitoring capacities. Over the course of the project, however, the MPPUs slowly disengaged as working partners of BDA. This lack of sustained engagement will pose a significant risk to sustainability of benefits in terms of the implementation and uptake of the spot improvement approach as an alternative to the conventional approach to road construction.
60. **Environmental sustainability.** Traditional gold mining in the project targeted areas is a cause of extensive damage such as deforestation, de-vegetation, erosion, watercourse silting and disrupted drainage patterns. This situation could have a significant negative impact on the sustainability of the road if drainage does not follow the original design pattern, resulting in damage to the embankment and associated structures. The RAP attempted to mitigate such environmental damage in the areas through efforts such as forestation, while the SWC maintenance activities will make the roads resilient to flooding.
61. At appraisal, an environment and social review was undertaken. Beyond providing specific recommendations on the measures needed to be taken to mitigate the environmental impacts caused by the uncontrolled expansion of gold mining in the Butana, the completion mission did not consider relevant to undertake a specific ex-post environmental impact study of the road construction due to the low physical progress.⁹
62. **Overall.** The RAP could not perform well in all three indicators identified in the 2009 President's Report as milestones for project sustainability: (i) road departments' technical capacity; (ii) a CRF; and (iii) spot improvement approach for rural roads rather than the conventional approach to road construction. This PCR, hence rates sustainability as **moderately unsatisfactory (3)**, in line with the PCR rating.

B. Other performance criteria

63. **Innovation.** RAP introduced and tested some innovative approaches in the project for rural road maintenance. These include the following:
 - *The spot improvement approach* was introduced to complement the rural roads constructed under the ARP. The idea was to mainstream this approach into national policy, through involving the NHBA and MPPUs during the road construction and supervision.
 - *The use of labour-based community contracting* in remote or rural areas for some of the maintenance works to reduce the cost of maintenance.
 - *The CRF* was introduced as a core sustainability pillar for the maintenance of the road. Since the construction works were not completed, little or no progress was made on both setting up the CRF and on the issuance of necessary by-laws and decrees to levy market fees and road tolls to finance road maintenance.

⁹ RAP PCR.

64. Notwithstanding the above, especially in the cases of CRF and scaling up of the sport improvement approach, the innovations introduced could not be fully adopted. Despite preliminary undertakings to operationalise the CRF, these had not been set up at project completion. The PCR states that the failure to set up the CRF will have significant negative implications for the sustainability of the constructed works.
65. Based on the above, innovation is rated as **moderately unsatisfactory (3)** in the PCR, as in the PCR.

Scaling up

66. The PCR states that no scaling up had taken place emanating from this project. This can be attributed to the limited role of the key stakeholders agreed upon at the design stage. The NHBA and MPPUs did not undertake a campaign to promote adopting the innovative aspects of the project (e.g., spot improvement approach) as a feasible alternative for construction of other feeder roads, in particular, state roads in the rainfed areas. Thus, even though the RAP introduced some innovative aspects such as the spot improvement approach, they were not taken up or adopted by relevant authorities or other actors during the life of the project.
67. It is noted that the Kassala state government financed, from its resources, the link road between Sitta Arab to New Halfa (3.5 km). This link road (contract amount of US\$1.36 million) was designed and supervised by the same consulting firm contracted under RAP.¹⁰ This may not exactly fit the IFAD definition of "scaling-up"¹¹ and it is also not entirely clear whether the construction of this link road would be considered as something "leveraged" by the work on Subagh-Sitta Arab initiated under RAP. However, it would be fair to say that what RAP invested in is critical for development of the area and could lead to greater results.
68. The PCR rating on scaling up is **moderately unsatisfactory (3)**, in line with the PCR.

Gender equality and women's empowerment

69. RAP followed the BIRDP targeting strategy and selection criteria methodology, ensuring strong women representation in trainings and membership in village road committee. According to the 2014 supervision mission report, the project approach to gender mainstreaming has drawn more attention to women participation, involvement and empowerment. During its field visits, the supervision mission noted the presence of women as members of road committees and other village development committees actively participating in meetings.
70. According to the PCR, the "data from the Results and impact management system (RIMS) for 2015 showed that 36,866 men and 31,935 women [46 per cent] in the targeted population living adjacent to the newly constructed road in the targeted 22 communities received project services". It thus seems that the numbers reflect the general gender composition in the project area, in light of the nature of the intervention. In addition, reportedly 1,031 women out of the targeted 1,700 benefitted from trading in the markets following the road alignments.
71. RAP gender equity and women empowerment is rated as **moderately satisfactory (4)**, as in the PCR.

Environment and natural resources management

72. According to the President's Report, pursuant to IFAD's environmental assessment procedures, the project was classified as a Category B operation in that it was not likely to have any significant negative environmental impact.

¹⁰ PCR paragraph 22.

¹¹ "Expanding, adapting and supporting successful policies, programmes and knowledge so that they can leverage resources and partners to deliver larger results for a greater number of rural poor in a sustainable way". (<https://www.ifad.org/en/scaling-up-results>)

73. According to the PCR, RAP attempted to mitigate the environmental damage (e.g., uncontrolled expansion of gold mining) through afforestation by broadcasting tree seeds on the edge of dug pits. It is reported that since 2013, RAP broadcasted seeds to cover gold mining bits around the road in an area of 12,000 Feddans. Moreover, the BIRDP and RAP team formed and organised interest groups to increase the adoption of good natural resource management practices through five joint awareness campaigns and inter-community knowledge-sharing event.
74. The PCR reports that community-based organisations were trained on conservation and water control works and a total of 493 terraces covering 2,450 feddans were either constructed or rehabilitated along the boundaries of the existing farms adjacent to the road.
75. The PCR warns of potentially serious negative impacts of uncontrolled expansion of gold mining on the sustainability of the roads and on the surrounding environment, such as deforestation and de-vegetation, erosion and watercourse silting and disruption of drainage patterns. As described above, the project made efforts at ground level (e.g. broadcasting of tree seeds), but the PCR indicated the need for a comprehensive and multi-sectoral policy response; otherwise it will have a negative impact on the sustainability of the road. The PCRV rating on environment and natural resource management is **moderately unsatisfactory (3)**, just as the PCR.

Adaptation to climate change

76. Climate change was not an explicit objective of the project. According to the PCR, SWC activities and forestation will make the roads resilient to the effects of climate change.
77. The PCR rates adaptation to climate change as **moderately unsatisfactory (3)** but since the RAP did not have a focus on climate change, this criterion is not rated in the PCRV.

C. Overall project achievement

78. The project managed to reach a considerable number of beneficiaries (68,801 direct beneficiaries, 46 per cent women). While the attribution of some claimed impacts is difficult to establish, it is plausible that improved rural road conditions – although for significantly shorter length than initially planned - facilitated people's access to markets and services and contributed to improved livelihoods.
79. Overall, the RAP performance was hindered by severe delays in the construction work, formation of CRF, as well as lack of interest about and buy in of the spot improvement approach by the key state stakeholders such as NHBA and MPPUs. Some of these delays were due to the poor performance of the contractor, resulting from the price escalation and what seem to be issues pertaining to management of the contract.
80. The overall performance of RAP is considered **moderately unsatisfactory (3)**, in line with the PCR.

D. Performance of partners

81. **IFAD.** The RAP benefitted from 10 supervision and follow-up missions including one mid-term review in October 2012.¹² According to the PCR, these missions comprised multi-disciplinary teams of professional experts who monitored all aspects of programme activities. Moreover, these missions provided instrumental technical recommendations to pick up the pace of implementation of project activities. IFAD missions also provided constructive suggestions for overcoming implementation constraints and guidance on appropriate actions to be taken.

¹² 2016 RAP PCR, Appendix 5.

82. The PCR states that the feedback received on IFAD's support from the concerned State Ministries and the consulting firm on the quality of supervision and implementation support was very positive. The close and regular supervision and implementation support provided by IFAD contributed significantly to improve project implementation pace and progress.
83. IFAD could have better studied the project areas at design stage to avoid substantial changes in the approach to road designing. The implementation delays and lack of interest from key stakeholders could have been highlighted as risks in the logical framework and a mitigation strategy could have been prepared in advance.
84. The performance of IFAD is rated in the PCR as **moderately satisfactory (4)**, in line with the PCR.
85. **Government.** According to the PCR, the government of Sudan participated in national RAP steering committee meetings regularly.
86. The PCR states that as per project design agreement, the government counterpart fund was used for payment of customs duties and taxes. The Government met its obligations regarding customs duties on imported goods and taxes on local project procurement, including VAT exemptions on construction contracts.
87. According to the PCR, the following covenants were not met at the end of the project:
- The CRF was not set up. Also, the Kassala and Gedarif state governments did not issue the required decrees to introduce road maintenance fees and a good governance framework, despite repeated recommendations by supervision missions.
 - After receiving on site job training for its engineers, the State's MPPUs slowly disengaged from joint supervision and monitoring activities as working partners of BDA. This lack of sustained engagement is posing a significant risk to project sustainability.
 - The NHBA, given its mandate and collaboration with the states, was to undertake project monitoring with a view to mainstream its approach in government policy and programmes for rural roads, and subsequent replication. NHBA was absent from the project's implementation phase. It was not clear whether this occurred as a result of a lack of coordination, capacity or motivation.
 - The NHBA's absence from the project's implementation phase stood in the way of mainstreaming the spot improvement approach within government planning and replicating the approach in other similar contexts in Sudan.
88. On the other hand, even if NHBA was not closely involved in the project implementation, reportedly they still had (and played) a role in facilitating the works.¹³
89. The performance of Government is rated **moderately unsatisfactory (3)**, in line with the PCR.

IV. Assessment of PCR quality

90. **Scope.** The PCR covered all the aspects set out in the PCR guidelines of 2015. This includes the evaluation criteria in the main text as well as detailed annexes, as stipulated in the guidelines. Scope of the PCR is hence rated **moderately satisfactory (4)**.

¹³ For example, by availing fuel supplies to contractors in face of the shortage at the national level, sometimes in paying price escalation due to high inflation, in addition to tax exemptions as appropriate. The demarcation of the road pathway and the compensation to communities affected by construction works were done through the NHBA. (information provided by the IFAD Programme Management Department as part of the comments on the draft PCR).

91. **Quality.** The PCR lacks detailed assessment of progress made towards all the outcomes and impact indicators stated in the project logframe. The data is gathered and presented on key indicators, but the report seems to not fully interpret the data, draw conclusions and generate recommendations.
92. Some sections of the PCR lack detailed explanation of the causes and effects of (un)intended outcomes such as social cohesions, women participation and conflict resolution. The Sustainability and Scaling-up sections do not talk in detail why the government authorities disengaged from the project. Also, details on the IFAD supervision missions' recommendations not being acted upon by the RAP is missing. The rating of the quality of the PCR is **moderately satisfactory (4)**.
93. **Lessons.** The PCR presents several lessons, which are generally relevant. The rating is a **satisfactory (5)**.
94. **Candour.** The PCR has been found to be critical in most of the sections in the document. The PCRV and PCR agree on most ratings. The candour of the PCR is rated as **Satisfactory (5)**.
95. **Overall PCR quality.** Based on the above, the overall quality of the PCR is rated as **moderately satisfactory (4)**.

V. Final remarks and lessons learned

Final remarks

96. The RAP activities were not all completed at the time of the preparation of PCR as well as the PCRV. Although IFAD granted an extension, still the main component of the project was not over.
97. The PCRV found the project intervention logic ambitious. Rehabilitation or construction of roads may not be the only intervention required for the desired effects to realise in the targeted areas. Although the PCR showcase some data on positive change at household and at the community level, the attribution of impact and results to the project is challenging. Indeed, RAP was very much linked to another integrated rural development project financed by IFAD, i.e. BIRD. The monitoring and evaluation of the project, the PCR and the validation exercise could have been combined with the BIRD data and assessments to provide a clearer picture of the (un)intended effects of the intervention.
98. The implementation delays could have been considered as a risk factor allowing appropriate mitigation strategies in the logical framework and the project documents. RAP could have benefitted from a better study of the areas at design stage to avoid road redesigning. Pre-project consultations with the related government agencies expected to scale up the project and to ensure sustainability could also be emphasised through pre-project consultations with key stakeholders.

Lessons learned

99. The lessons presented below are a mix of learning emerging from the PCR as well as recommendation from this validation exercise.
100. **A detailed stakeholder analysis and a better assessment of institutional capacity can ensure sustainability and upscaling.** In future, IFAD could benefit in identifying the key assumptions and risks when identifying and working with the key stakeholders for sustainability and upscaling of project intervention/innovations and subsequently including them in the project activities and progress indicators in the project logical framework.
101. **Try and test new ways of influencing the state duty bearers at local level.** The RAP experienced an active participation of communities in the project, especially the women. The voices of communities could be amplified further for influencing the state duty bearers, such as NHBA and MPPUs.

102. **Making sense of data and disseminating it widely is important.** In the contexts that are fragile, complex and fluid, emphasis should be laid on establishing a strong evidence base that can drive policy dialogue. This involves, investing in making sense of that data collected through monitoring and evaluation exercises, validating it with the communities to extend the ownership of the findings and disseminating it to the stakeholders along with the help of people to whom the findings matter.
103. **Take sustainability seriously in environments affected by poor governance.** The delay in project delivery affected the most innovative features of the project such as the establishment of CRF and scaling up of the spot improvement approach. This puts the sustainability of the roads on stake, which in result could cause negative impact in the targeted rural communities.

Definition and rating of the evaluation criteria used by IOE

Criteria	Definition *	Mandatory	To be rated
Rural poverty impact	Impact is defined as the changes that have occurred or are expected to occur in the lives of the rural poor (whether positive or negative, direct or indirect, intended or unintended) as a result of development interventions.	X	Yes
	<i>Four impact domains</i>		
	<ul style="list-style-type: none"> Household income and net assets: Household income provides a means of assessing the flow of economic benefits accruing to an individual or group, whereas assets relate to a stock of accumulated items of economic value. The analysis must include an assessment of trends in equality over time. 		No
	<ul style="list-style-type: none"> Human and social capital and empowerment: Human and social capital and empowerment include an assessment of the changes that have occurred in the empowerment of individuals, the quality of grass-roots organizations and institutions, the poor's individual and collective capacity, and in particular, the extent to which specific groups such as youth are included or excluded from the development process. 		No
	<ul style="list-style-type: none"> Food security and agricultural productivity: Changes in food security relate to availability, stability, affordability and access to food and stability of access, whereas changes in agricultural productivity are measured in terms of yields; nutrition relates to the nutritional value of food and child malnutrition. 		No
	<ul style="list-style-type: none"> Institutions and policies: The criterion relating to institutions and policies is designed to assess changes in the quality and performance of institutions, policies and the regulatory framework that influence the lives of the poor. 		No
Project performance	Project performance is an average of the ratings for relevance, effectiveness, efficiency and sustainability of benefits.	X	Yes
Relevance	The extent to which the objectives of a development intervention are consistent with beneficiaries' requirements, country needs, institutional priorities and partner and donor policies. It also entails an assessment of project design and coherence in achieving its objectives. An assessment should also be made of whether objectives and design address inequality, for example, by assessing the relevance of targeting strategies adopted.	X	Yes
Effectiveness	The extent to which the development intervention's objectives were achieved, or are expected to be achieved, taking into account their relative importance.	X	Yes
Efficiency	A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted into results.	X	Yes
Sustainability of benefits	The likely continuation of net benefits from a development intervention beyond the phase of external funding support. It also includes an assessment of the likelihood that actual and anticipated results will be resilient to risks beyond the project's life.	X	Yes
Other performance criteria			
Gender equality and women's empowerment	The extent to which IFAD interventions have contributed to better gender equality and women's empowerment, for example, in terms of women's access to and ownership of assets, resources and services; participation in decision making; work load balance and impact on women's incomes, nutrition and livelihoods.	X	Yes
Innovation	The extent to which IFAD development interventions have introduced innovative approaches to rural poverty reduction.	X	Yes
Scaling up	The extent to which IFAD development interventions have been (or are likely to be) scaled up by government authorities, donor organizations, the private sector and others agencies.	X	Yes
Environment and natural resources management	The extent to which IFAD development interventions contribute to resilient livelihoods and ecosystems. The focus is on the use and management of the natural environment, including natural resources defined as raw materials used for socio-economic and cultural purposes, and ecosystems and biodiversity - with the goods and services they provide.	X	Yes
Adaptation to climate change	The contribution of the project to reducing the negative impacts of climate change through dedicated adaptation or risk reduction measures.	X	Yes

<i>Criteria</i>	<i>Definition</i> *	<i>Mandatory</i>	<i>To be rated</i>
Overall project achievement	This provides an overarching assessment of the intervention, drawing upon the analysis and ratings for rural poverty impact, relevance, effectiveness, efficiency, sustainability of benefits, gender equality and women's empowerment, innovation, scaling up, as well as environment and natural resources management, and adaptation to climate change.	X	Yes
Performance of partners			
• IFAD	This criterion assesses the contribution of partners to project design, execution, monitoring and reporting, supervision and implementation support, and evaluation. The performance of each partner will be assessed on an individual basis with a view to the partner's expected role and responsibility in the project life cycle.	X	Yes
• Government		X	Yes

* These definitions build on the Organisation for Economic Co-operation and Development/Development Assistance Committee (OECD/DAC) Glossary of Key Terms in Evaluation and Results-Based Management; the Methodological Framework for Project Evaluation agreed with the Evaluation Committee in September 2003; the first edition of the Evaluation Manual discussed with the Evaluation Committee in December 2008; and further discussions with the Evaluation Committee in November 2010 on IOE's evaluation criteria and key questions.

Rating comparison^a

<i>Criteria</i>	<i>Programme Management Department (PMD) rating</i>	<i>IOE Project Completion Report Validation (PCRVR) rating</i>	<i>Net rating disconnect (PCRVR-PMD)</i>
Rural poverty impact	4	4	0
Project performance			
Relevance	6	5	-1
Effectiveness	3	3	0
Efficiency	3	3	0
Sustainability of benefits	3	3	0
Project performance^b	3.75	3.5	-0.25
Other performance criteria			
Gender equality and women's empowerment	4	4	0
Innovation	3	3	0
Scaling up	3	3	0
Environment and natural resources management	3	3	0
Adaptation to climate change	3	-	-
Overall project achievement^c	3	3	0
Performance of partners^d			
IFAD	4	4	0
Government	3	3	0
Average net disconnect			-0.09

^a Rating scale: 1 = highly unsatisfactory; 2 = unsatisfactory; 3 = moderately unsatisfactory; 4 = moderately satisfactory; 5 = satisfactory; 6 = highly satisfactory; n.p. = not provided; n.a. = not applicable.

^b Arithmetic average of ratings for relevance, effectiveness, efficiency and sustainability of benefits.

^c This is not an average of ratings of individual evaluation criteria but an overarching assessment of the project, drawing upon the rating for relevance, effectiveness, efficiency, sustainability of benefits, rural poverty impact, gender, innovation, scaling up, environment and natural resources management, and adaptation to climate change.

^d The rating for partners' performance is not a component of the overall project achievement rating.

Ratings of the project completion report quality

	<i>PMD rating</i>	<i>IOE PCRVR rating</i>	<i>Net disconnect</i>
Candour		5	
Lessons		5	
Quality (methods, data, participatory process)		4	
Scope		4	
Overall rating of the project completion report		4	

Rating scale: 1 = highly unsatisfactory; 2 = unsatisfactory; 3 = moderately unsatisfactory; 4 = moderately satisfactory; 5 = satisfactory; 6 = highly satisfactory; n.p. = not provided; n.a. = not applicable.

Abbreviations and Acronyms

ARP	Agricultural Revival Programme
BDA	Butana Development Agency
BIRD	Butana Integrated Rural Development Project
DSF	Debt sustainability framework
COSOP	Country strategic opportunities programme
CRF	Community road fund
IFAD	International Fund for Agricultural Development
IOE	Independent Office of Evaluation (of IFAD)
MPPU	Ministry of Physical Planning and Public Utilities
NHBA	National Highways and Bridges Authority
PCR	Project completion report
PCR	Project completion report validation
RAP	Rural Access Project
RIMS	Results and impact management system
SDG	Sudanese Pounds
SWC	Soil & Water Conservation

Bibliography

International Fund for Agricultural Development (IFAD). 2016. The Republic of Sudan, RAP Project Completion Report.

_____. 2016. RAP impact evaluation survey (submitted by El-Zanaty & Associates) dated March 2016.

_____. 2013. Country strategic opportunities programme (COSOP) - Republic of Sudan.

_____. 2009. RAP project design report.

_____. 2009. RAP President's report.

_____. RAP Projects supervision mission reports, 2012, 2013 and 2014.

The Republic of Sudan and IFAD. 2010. RAP Financing Agreement.