

GRANT NO. NDF C52

GRANT AGREEMENT

between

THE REPUBLIC OF ZAMBIA

and

NORDIC DEVELOPMENT FUND

Developing Climate Resilient Infrastructure and Capacity under the Strategic Programme for Climate Resilience

Dated 20th March, 2014

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GRANT AGREEMENT

between the REPUBLIC OF ZAMBIA (the "Recipient") and NORDIC DEVELOPMENT FUND (the "Fund").

WHEREAS

- a) the Fund was established as a Nordic multilateral development financing institution pursuant to an agreement between the Governments of Denmark, Finland, Iceland, Norway and Sweden for the purpose of promoting economic and social development in developing countries through participation in financing on concessional terms of projects of interest to the Nordic Countries;
- b) the Recipient, having satisfied itself of the feasibility and priority of the project described in Annex 1 to this Agreement (the "Project"), has requested the Fund to assist in the financing of the Project;
- c) the Recipient has on 14 June 2013 entered into a Grant and a Loan Agreement with the World Bank (the "Lead Agency") to assist in the financing of the Project;
- d) the Project will be carried out by the Road Development Agency (RDA) (the "Implementing Agency"). The Recipient will make the proceeds of the Grant (as defined in Article 1) available to the Implementing Agency as provided for in this Agreement;
- f) the Fund, in accordance with a co-operation agreement dated 19 April, 2012, will cooperate and exchange information with the Lead Agency during the implementation of the Project;
- g) the Recipient and the Fund have on 6 June 1996 entered into an agreement on the legal status of the Fund in the Republic of Zambia;
- h) the Fund has agreed, on the basis, inter alia, of the foregoing, to extend the Grant to the Recipient upon the terms and conditions set forth in this Agreement;

NOW IT IS AGREED:

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[Signature]

ARTICLE I

Definitions

1.01 Wherever used in this Agreement, unless the context otherwise requires, the several terms defined in the Preamble to this Agreement have the meanings therein set forth, and the following additional terms have the following meanings:

"Agreement" means this particular grant agreement, including all annexes, schedules and agreements supplemental hereto, as such agreement may be amended from time to time;

"Anticorruption Policy" means NDF's Policy on Anticorruption and Integrity dated 1 October 2012, as amended from time to time;

"Banking Day" means, in relation to any place where transactions under this Agreement have to be carried out, a day on which commercial banks in such place are neither required nor authorised to be closed;

"Closing Date" means a date after which the right of the Recipient to make drawdowns under this Agreement may be terminated by the Fund;

"Contractor" means a supplier of goods, works and/or services for the Project, selected in accordance with Annex 1 to this Agreement;

"Dollar(s)", "USD" and the sign "\$" mean the currency of the United States of America;

"EUR" and the sign "€" mean euro, the lawful currency of the member states of the European Union that adopt the single currency in accordance with the Treaty establishing the European Community (signed in Rome on 25th March 1957), as amended by the Treaty on European Union (signed in Maastricht on 7th February 1992);

"Grant" means the grant provided for in this Agreement or any part thereof, as the context requires;

"Prohibited Practices" mean corrupt, fraudulent, collusive, coercive and obstructive practices, as defined in the Anticorruption Policy;

"Taxes" includes imposts, levies, fees and duties of any nature, whether in effect at the date of this Agreement or imposed thereafter.

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ARTICLE II

The Grant

Use of the Grant - Financing of Taxes

Disbursements

2.01 The Fund agrees to grant to the Recipient, on the terms and subject to the conditions set forth or referred to herein, an amount of up to EUR 4,000,000.00 (four million euros).

2.02 The Recipient shall be entitled to draw down the Grant in accordance with the provisions of this Agreement, for the purpose of paying eligible expenditures incurred in respect of the reasonable cost of goods, works and services required for the Project and to be financed by means of the Grant.

2.03 Unless the Fund shall agree otherwise, no amount of the Grant shall be drawn or be applied, directly or indirectly, on account of expenditures incurred prior to the date of this Agreement.

The use of any of the proceeds of the Grant to pay for Taxes levied by, or in the territory of, the recipient on or in respect of eligible expenditures, or on the importation, manufacture, procurement or supply of goods, works and services for such eligible expenditures, if permitted pursuant to this Agreement, is subject to the Fund's policy of requiring economy and efficiency in the use of the proceeds of its grants. To that end, if the Fund at any time determines that the amount of any such Tax is excessive, or that such Tax is discriminatory or otherwise unreasonable, the Fund may, by notice to the Recipient, adjust the percentage of such expenditures to be financed out of the proceeds of the Grant, as required to ensure consistency with such policy of the Fund.

2.04 Drawdowns shall reflect the implementation of the Project. The proceeds of the Grant shall be paid in accordance with the Fund's Disbursement Instructions (i) directly to the Contractor(s), or (ii) to a third party for eligible expenditures under special commitments entered into, in writing, at the Recipient's request and on terms and conditions agreed between the Fund and the Recipient, or (iii) to one or more special accounts opened for the purposes of the Project on terms and conditions acceptable to the Fund.

2.05 Subject to the conditions of disbursement specified in Article III having been, and remaining, fulfilled to the Fund's satisfaction, disbursements under the Grant shall be made upon receipt by the Fund of (i) a disbursement request acceptable to the Fund, duly documented, and submitted by or on behalf of the Recipient, or (ii) in case of special commitment, a payment request submitted by the third party to whom the special commitment was provided by the Fund.

2.06 Each disbursement shall be made on a date determined by the Fund. Unless the Recipient has requested disbursement on a specified later date, disbursement will normally be made not later than 30 calendar days after receipt of the disbursement request, provided that all conditions precedent to disbursement set out in Article III hereof have been fulfilled.

2.07 The Closing Date shall be 31 December 2019, or such later date as the Fund shall establish. The Fund shall promptly inform the Recipient of such later date.

ARTICLE III
Conditions of Disbursement

3.01 Unless otherwise agreed, the making of disbursements from the Grant shall be subject to the conditions precedent that

(a) this Agreement is in full force and effect, and no event, which would entitle the Fund to suspend disbursements under this Agreement, shall have occurred and be continuing;

(b) the Recipient has taken or caused to be taken all action necessary or advisable to enable the Recipient to receive the Grant and to perform its obligations hereunder, including obtaining all required exemptions, consents and permits; and

(c) the Fund has received and accepted

- (i) a legal opinion showing that this Agreement has been duly authorised or ratified by, and executed and delivered on behalf of, the Recipient and is legally binding upon the Recipient in accordance with its terms;
- (ii) if requested by the Fund, further evidence satisfactory to it that the execution and delivery of this Agreement on behalf of the Recipient has been duly authorised by all necessary authorities;
- (iii) evidence satisfactory to it of the authority of the person or persons authorised to sign disbursement requests and the authenticated specimen signature of any such person;
- (iv) evidence satisfactory to it that other financing for the Project, including financing from the Recipient as well as the Lead Agency, has been obtained and that conditions precedent to the effectiveness of such financing have been met;
- (v) if relevant, certified copies of implementation agreements, acceptable to the Fund, whereby the Recipient makes the Grant available to the Implementing Agencies;
- (vi) if relevant, evidence that Special Account(s) have been opened on terms and conditions satisfactory to the Fund; and
- (vii) any other documentation the Fund reasonably requests relating to the execution of this Agreement or the implementation of the Project

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[Signature]

ARTICLE IV
Currency Provisions

4.01 The proceeds of the Grant shall be disbursed in freely convertible currency with reference to EUR in accordance with section 4.02 hereof.

4.02 Whenever it shall be necessary for the purpose of this Agreement to determine the value of one currency or unit of account with reference to another currency or unit of account as of a given date, such value shall be as reasonably determined by the Fund.

ARTICLE V
Co-operation and Information

Recipient's Undertakings and Representations

5.01 The Recipient and the Fund shall co-operate fully to ensure that the purpose of the Grant will be accomplished. To that end, each of them shall furnish to the other party all such information as it shall reasonably request with regard to the general status of the Project.

5.02 (a) The Recipient and the Fund declare their commitment to counteract Prohibited Practices, as defined in NDF's Anticorruption Policy, in relation to the Grant and the execution of the Project. The Recipient shall promptly inform the Fund of any allegation or finding of Prohibited Practices in connection with the Project or with the use of the Grant.

(b) The Recipient undertakes to take all necessary action prevent Prohibited Practices within its territory and to pursue, by all appropriate means, any such practices whenever identified and to ensure that the Project is implemented in accordance with the Anticorruption Policy.

5.03 The Recipient shall promptly inform the Fund of (i) any condition which interferes or threatens to interfere with the accomplishment of the purpose of the Grant (including substantial increase in the cost of the Project), and (ii) any event which with the lapse of time or otherwise would entitle the Fund to suspend disbursements under this Agreement.

ARTICLE VI
Execution of the Project

6.01 The Recipient shall take or cause to be taken all action which shall be necessary to execute the Project with due diligence and efficiency and in conformity with appropriate administrative, financial, engineering, social, environmental and climate change mitigation and adaptation practices. These practices also include transparency in project operations and wide and easy access to public information on the project. In particular, the Recipient shall make available to the public (i) project related safeguards assessments and plans related to environment, resettlement, and indigenous peoples; (ii) audited annual financial statements for the project; (iii) procurement plans; and (iv) results of procurement procedures.

6.02 (a) The Recipient shall ensure that the proceeds of the Grant shall be used only for the financing of the Project or, as applicable, Project component(s) for which the Grant is extended. Procurement of the goods, works and services required for the Project and to be financed out of the proceeds of the Grant shall be governed by the provisions of Annex 1 to this Agreement as said provisions may be further elaborated in the Procurement Plan.

(b) The Recipient shall prepare or cause to be prepared a Procurement Plan in accordance with procurement guidelines acceptable to the Fund for a period covering at least 18 initial months of the project execution, and update the Procurement Plan and furnish such update to the Fund for "no objection" not later than 12 months after the date of the preceding Procurement Plan.

(c) The Recipient shall ensure that in respect of procurement of goods, works and services for the Project, invitations to tender as well as procurement contracts shall, respectively, include clauses that gives the Recipient and the buyer the right to (i) demand investigations of the tenderer's/Contractor's books by independent auditors for the purpose of ascertaining whether or not Prohibited Practices have taken place, (ii) reject any tender and cancel any procurement contract in case any Prohibited Practices have taken place in connection with the procurement procedure related to the contract or the execution thereof, (iii) claim compensation for the damage or loss arising from any such rejection of tender or cancellation of contract, and (iv) exclude the tenderer/Contractor, either indefinitely or for a certain period of time, from competing for and participating in the execution of contracts in the territory of the Recipient.

6.03 In addition to the proceeds of the Grant the Recipient shall make available or cause to be made available promptly when needed, all other funds that are required for the execution of the Project (including any funds that may be required to meet any increase in cost).

6.04 The Recipient shall insure or cause to be insured, or make adequate provision for the insurance of, the imported goods to be financed out of the proceeds of the Grant against hazards incidental to the acquisition, transportation and delivery thereof to the place of use or installation. Any indemnity for such insurance shall be payable in a freely usable currency to replace or repair such goods.

6.05 The Recipient shall:

(i) maintain or cause to be maintained records and procedures adequate to record and monitor the progress of the Project (including its cost and the benefits to be derived from it), to identify the goods, works and services financed out of the proceeds of the Grant and to disclose their use in the Project;

(ii) enable the Fund's representatives to visit any facilities and construction sites included in the Project and to examine the goods, works and services financed out of proceeds of the Grant and any plants, installations, sites, works, buildings, property, equipment, records and documents relevant to the performance of the obligations of the Recipient under this Agreement; and

(iii) furnish or cause to be furnished to the Fund at regular intervals reasonably detailed information concerning the Project, its budgeted and actual cost, the budgeted and actual expenditure of the proceeds of the Grant, and the goods and services financed out of such proceeds. Audited accounts of the use of the Grant for the preceding financial year (January-December) shall be provided not later than 30 June each year up to and including Project completion.

6.06 Promptly after completion of the Project, but in any event not later than six months after the Closing Date or such later date as may be agreed for this purpose between the Recipient and the Fund, the Recipient shall prepare and furnish, or cause to be prepared and furnished, to the Fund a reasonably detailed

report on the execution and initial operation of the Project, its cost and the benefits derived and to be derived from it.

ARTICLE VII

Suspension and Cancellation

7.01 If any of the following events of suspension shall have occurred and be continuing, the Fund may, by notice to the Recipient, suspend in whole or in part the right of the Recipient to draw down the Grant:

- (a) The Recipient shall have failed to perform any obligation under this Agreement.
- (b) The Recipient shall have failed to make payment of principal, charges or any other amount due to the Fund under any credit, grant or guarantee agreement between the Recipient and the Fund.
- (c) The Recipient shall have failed to perform any of its obligations (other than payment obligations) under any credit or grant agreement with the Fund which gives the Fund the right to suspend in whole or in part the right of the Recipient to make drawings under such agreement.
- (d) As a result of events which have occurred after the date of this Agreement, an extraordinary situation shall have arisen which shall make it improbable that the Project can be carried out or that the Recipient will be able to perform its obligations under this Agreement.
- (e) An extraordinary situation shall have arisen in which any further disbursement by the Fund would exceed its resources available for disbursement.
- (f) A representation made by the Recipient in or pursuant to this Agreement, or any statement furnished in connection therewith, and intended to be relied upon by the Fund in extending the Grant, shall have been incorrect in any material respect.
- (g)
 - (i)
 - (A) The right of the Recipient to draw down the proceeds of any grant or loan made to the Recipient (other than by the Fund) for the financing of the Project shall have been suspended, cancelled or terminated in whole or in part, pursuant to the terms of the agreement providing therefor, or
 - (B) any such grant shall have become repayable or any such loan shall have become due and payable prior to the agreed maturity thereof.
 - (ii) Subparagraph (i) of this paragraph shall not apply if the Recipient establishes to the satisfaction of the Fund that (A) such suspension, cancellation, termination or prematuring is not caused by the failure of the Recipient to perform any of its obligations under such agreement; and (B) adequate funds for the Project are available to the Recipient from other sources on terms and conditions consistent with the obligations of the Recipient under this Agreement.
- (h) The Fund shall have determined, with respect to any contract to be financed in full or in part out of the proceeds of the Grant, that Prohibited Practices were engaged in by representatives of the Recipient or any beneficiary of the Grant during the procurement of goods and services,

consultants' selection or the execution of a contract, without the Recipient having taken timely and appropriate action satisfactory to the Fund to remedy the situation; or the Fund shall have determined that the procurement of any goods or services to be financed out of the proceeds of the Grant is inconsistent with the relevant procedure agreed on between the Recipient and the Fund.

- (i) The Recipient has failed to pay any of its external debt to a multilateral financial institution.
- (j) Payments to the Recipient are prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations.

The right of the Recipient to draw down the Grant shall continue to be suspended in whole or in part, as the case may be, until the event or events which gave rise to such suspension shall have ceased to exist, unless the Fund shall have notified the Recipient that the right to draw down has been restored in whole or in part, as the case may be.

7.02 If (a) the conditions precedent to the first disbursement have not been fulfilled 90 calendar days after the date of this Agreement, or (b) the right of the Recipient to draw down the Grant shall have been suspended for a continuous period of thirty days, or (c) at any time, the Fund determines, after consultation with the Recipient, that an amount of the Grant will not be required to finance the Project's costs to be financed out of the proceeds of the Grant, or (d) at any time the Fund determines, with respect to any contract to be financed in full or in part out of the proceeds of the Grant, that Prohibited Practices were engaged in by representatives of the Recipient or any beneficiary of the Grant during the procurement of goods and services, consultants' selection or the execution of a contract, without the Recipient having taken timely and appropriate action satisfactory to the Fund to remedy the situation; (e) after the Closing Date, an amount of the Grant shall remain undrawn, the Fund may, by notice to the Recipient, terminate the right of the Recipient to draw down the Grant or, as applicable, the relevant amount of the Grant. Upon the giving of such notice, the Grant or the relevant amount of the Grant, shall be cancelled.

7.03 Notwithstanding any suspension or cancellation, all the provisions of this Agreement shall continue in full force and effect except as specifically provided in this Article.

ARTICLE VIII

Repayment

8.01 The Recipient shall upon the Fund's demand promptly repay to the Fund (or, if applicable and agreed by the Fund, to the Special Account) any amount of the Grant used in a manner inconsistent with the provisions of this Agreement.

8.02 The Recipient shall upon the Fund's demand promptly repay to the Fund any amount of the Grant standing to the credit of a Special Account if the Fund determines, after consultation with the Recipient, that such amount will not be required to finance the Project's costs to be financed out of the proceeds of the Grant.

ARTICLE IX
Enforceability and Arbitration

Failure to Exercise Rights

Waiver of Immunity

9.01 The rights and obligations of the Recipient and the Fund under this Agreement shall be valid and enforceable in accordance with the terms hereof notwithstanding the law of any state or political subdivision thereof to the contrary. Neither the Recipient nor the Fund shall be entitled in any proceeding under this Article to assert any claim that any provision of this Agreement is invalid or unenforceable because of any provision of the Articles of Agreement or the Statutes of the Fund.

9.02 Any dispute, controversy or claim arising out of or relating to the interpretation, application or performance of this Agreement, including its existence, validity or termination, which has not been settled by agreement of the parties within 60 calendar days, shall be settled by final and binding arbitration under the Permanent Court of Arbitration Optional Rules for Arbitration Involving International Organizations and States, as in effect on the date of this Agreement.

The place of arbitration shall be Paris and the language of the arbitral proceedings shall be English.

9.03 Service of any notice of process in connection with any proceeding under this Article may be made in the manner provided for in section 10.02 hereof. The parties hereto waive any and all other requirements for the service of any such notice of process.

9.04 No delay in exercising or omission to exercise any right, power or remedy accruing to any party under this Agreement upon default or otherwise shall impair any such right, power or remedy or be construed to be a waiver thereof, nor shall any action of such party in respect of any default affect or impair any right, power or remedy of such party in respect of any other or subsequent default.

9.05 The parties hereby expressly waive any right of immunity they might have on the grounds of sovereignty or otherwise in connection with any arbitral proceeding pursuant to section 9.02 hereof or with the enforcement of any award pursuant thereto.

ARTICLE X
Miscellaneous Provisions

10.01 The Minister of the Recipient at the time responsible for finance is designated as representative of the Recipient for the purposes of signing and executing on behalf of the Recipient any documents used in connection with this Agreement. This notwithstanding, the Implementing Agency and the Fund may agree in writing upon any change to, or further specification of, Annex 1, Project Description, including the attached Procurement Schedule, provided that the amount of the Grant will not be increased, and any such change or further specification shall be deemed an integral part of this Agreement.

10.02 Any document, notice or request required or permitted to be given or made under this Agreement shall be made in writing in the English language and may be delivered (i) by airmail or internationally recognised courier service, (ii) by telefax, or (iii) by other electronic means to the party to which it is required or permitted to be given or made, at such party's address specified below or at such other address as such party shall have designated by notice to the other party. Any document, notice or request expressly required under this Agreement shall, if given by telefax or by other electronic means, promptly be confirmed by letter, and the Fund shall not be under any obligation to take any action until receipt of such letter.

For the Fund:

Nordic Development Fund

P.O.Box 185

FIN -00171 Helsinki

Finland

tel: +358 9 18 00451 telefax: +358 9 622 1491

For the Recipient:

Ministry of Finance

Chimanga Road

P.o Box 50062

Lusaka

Zambia

tel: + 260 211 250874 telefax: + 260 211 255185

For the Implementing Agency:

Road Development Agency

Director and Chief Executive Officer

Government/ Fairley Road

P.O Box 50003

Lusaka

Zambia

tel: +260 211 253088 / 253002 / 253801

telefax: +260 211 253404 / 251420

E-mail: rda_hq@roads.gov.zm

10.03 The Fund may disclose this Grant Agreement and any information related to this Grant Agreement in accordance with its policy on access to information, in effect at the time of such disclosure.


10.04 This Agreement is made in two copies each of which shall be an original.

10.05 The following annex forms part of this Agreement:

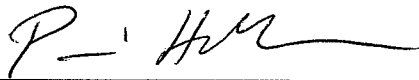
Annex 1 Project Description

IN WITNESS WHEREOF the parties hereto, acting through their duly authorised representatives, have caused this Agreement to be signed with their respective names as of _____.

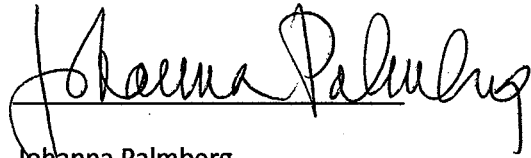
THE REPUBLIC OF ZAMBIA

By:  _____

NORDIC DEVELOPMENT FUND

By:  _____

Pasi Hellman
Managing Director



Johanna Palmberg
Country Program Manager

PROJECT DESCRIPTION

Project Objectives

The Strategic Programme for Climate Resilience (SPCR) aims at mainstreaming climate change into the most economically vulnerable sectors of the economy in order to ensure sustainable economic development towards the attainment of Zambia's Vision 2030. The SPCR is supported by four projects (administered by the International Development Association (IDA), the African Development Bank (AfDB), the International Finance Corporation (IFC), and the Nordic Development Fund (NDF) which are highly complementary and are, together with other program partners, assisting the Government in gradually moving from capacity building to implementation of climate resilience priorities.

The NDF financed adaptation sub-project will seek to develop climate resilient infrastructure and capacity of the road transport sub-sector experts in Zambia.

Project Activities and Expected Results

The WB administered project supports the strengthening of Zambia's institutional framework for climate resilience and improvement of the adaptive capacity of vulnerable communities in the Barotse sub-basin of the Zambezi. The AfDB-administered project will pilot complementary activities in the Kafue sub-basin. The IFC-administered project will provide private sector support to the two sub-basins.

NDF's parallel financed adaptation sub-project will systematically integrate climate change adaptation needs throughout the road transport sub-sector design and management process at policy level. The sub-project will also assist in developing climate-resilient infrastructure standards and norms and incorporate them into all relevant documents, construction and maintenance guidelines and tools. Furthermore, the sub-project shall develop and implement tools and protocols for preventative and mitigation measures for climatic hazard events.

NDF's Components

The major outcomes of the NDF support are to: 1) build adaptive capacities of key sector stakeholders in order to apply vulnerability and climate change knowledge in the road transport sub-sector, 2) integrate climate change adaptation into key policy documents, planning and design, design standards and technical guidelines. The sub-project has five major activities and expected results:

Activity 1: Vulnerability Assessment

1. Identify value at risk of existing infrastructure to losses from climate change impacts, particularly floods and heat. This includes identifying vulnerable roads or inappropriate road technologies under climate change stressors
2. Identify how peoples' and places' current and future vulnerability to climate change inadvertently may be affected by the road transport sub-sector when infrastructure is built

3. Identify intermodal vulnerability (i.e. from road to maritime transport) and options for flexible transport modes during floods

4. Economic evaluation of road infrastructure damage due to past exposure to climate change in Zambia (including cataloguing by stressors e.g. precipitation and temperature on infrastructure such as paved and unpaved road surfaces)

5. Develop a vulnerability mapping of the road transport infrastructure and propose possible interventions

Result/s: Knowledge about the vulnerability of the road transport sub-sector is increased and applied.

Adoption of vulnerability assessments findings by stakeholders and reference made in key policy, planning and design, construction and maintenance documents like the National Transport Policy, Master Plan, the ROAD SIP II addendum, ROAD SIP III and Investment Framework

Activity 2: Training

1. Training needs assessment to implement and sustain technical assistance activities

2. Develop a curriculum chart and syllabus for a programme of short courses on climate change vulnerability, impacts and adaptation for the road transport sub-sector, including carrying out training of trainers.

3. Identify centres of excellence for climate change, hydrology and infrastructure and develop program for cooperation with Zambian learning and research institutions

4. Develop long-term training on implementation of revised guidelines and tools for climate change adaptation in the transport sector to ensure re-skilling of sector professionals

5. Implement a short course on anti-corruption training using the WB "Red Flag Tool for the road sector" with relevant government staff and private construction companies

6. Workshop for Training and Testing for Institutional Readiness Scorecard, National Climate Impact Screening (NCIS), and Sectoral Guidelines

Result/s: Increased capacity of key transport sector stakeholders to identify how to reduce vulnerability to climate change in the transport sector through workshop reports, interviews with key stakeholders during mid-term and final evaluations

Activity 3: Policy

1. Review Policy provisions, institutional review and institutional readiness reports and develop recommendations for integration of climate change into the revised National Transport Policy

2. Based on assessment conducted as part of activity one, identify methods and make recommendations for integrating climate change adaptation into the national transport sector master plan

3. Propose revisions and criteria for incorporating climate change adaptation into the road sector investment framework

4. Hold Stakeholder consultations on policy and related reviews

Result/s: Climate change is integrated into key policy documents such as the National Transport Master Plan, the ROAD SIP II addendum, and the road sector investment framework

Activity 4: Technical (Development of Norms and Standards)

1. Review experiences and lessons from other countries on design, construction and maintenance practices for climate change adaptation in the road transport sub-sector and identify guidelines suitable for revisions
2. Stakeholder consultations presenting findings to date, proposal for guideline revisions and assessments of institutional needs for implementation
3. Work within the SPCR pilot projects areas of the Barotse and Kafue sub-basins to develop optimal methodology which can be generalized for regional, national and local level design guidelines
4. Review designs of upcoming projects for climate change resilience to identify areas for revision of guidelines, standards and practices
5. Draft amendments to Guidelines are produced, which can be used for planning, design, construction and maintenance of Trunk, Main, District, Urban, and Feeder roads
6. Test the application through pilot projects in the SPCR investment components or other roads projects as appropriate
7. Present recommended amendments to Association of Southern African Roads Agencies (ASANRA) through a Zambian hosted ASANRA workshop on climate change resilience in the road transport sector
8. Revise draft Guidelines based on experiences
9. Institutional review for implementation capacity needs to implement the Guidelines revisions as input into training program in Activity 1 and Activity 5 below

Result/s: Technical guidelines and standards are developed to integrate climate change adaptation into road sector design and management. Presented and discussed during ASANRA meeting

Activity 5: Institutional Arrangements and Cooperation for the Adoption and Implementation of Road Norms and Standards

1. Develop institutional mechanisms for the adoption and implementation of Road Norms and Standards. The following are key stakeholders:
 - Ministry of Transport, Works, Supply, and Communications,
 - Road Development Agency
 - Disaster Management and Mitigation Unit,
 - National Council for Construction
 - Zambia Bureau of Standards
 - Ministry of Local Government and Housing
2. Strengthen road asset management systems at RDA to better target maintenance works towards vulnerable areas
3. Increase collaboration between disaster risk management, climate change and transport sector stakeholders on coordinated approaches to disaster risk reduction and prevention

4. Assessment of gaps and approaches for improving mobility during disasters and for disaster prevention by the road sector stakeholders, thereby strengthening institutional capacity for response
5. Enhance Output Performance Road Contracts (OPRCs) to include climate change resilience standards

Result/s: Road transport sector systems include climate change adaptation mechanisms through a stakeholder consultative process. Workshop reports, agreements reached between agencies, road asset management reports developed

Cost Estimates and Financing Plan

The below tables illustrate the financing plan of the SPCR (Table 1), and a separate cost estimate of the NDF adaptation sub-project (Table 2).

Table 1: Financing plan for the SPCR

| Source | Amount (USD million) | Share of Total (%) |
|-----------------------------------|----------------------|--------------------|
| World Bank | 36 | 34 |
| Co-financiers | | |
| International Finance Corporation | 15 | 14 |
| African Development Bank | 39 | 37 |
| NDF | 5.15 | 5 |
| Government of Zambia | 10.8 | 10 |
| Total | 105.95 | 100 |

Table 2: Cost estimate for the NDF funded adaptation sub-project

| Budget line item | Total Cost Estimate EUR | Sub-Total/Total |
|--------------------------------|-------------------------|-----------------|
| Activity 1. Assessments | | |
| International Consultants | 270 000 | |
| National Consultants | 260 000 | |
| Expenses | 57 000 | |
| Sub-Total | | 587 000 |
| Activity 2. Training | | |
| International Consultants | 480 000 | |
| National Consultants | 50 000 | |
| Goods, Equipment | 200 000 | |
| Expenses | 125 000 | |
| Sub-Total | | 855 000 |
| Activity 3. Technical | | |
| International Consultants | 250 000 | |
| National Consultants | 230 000 | |
| Expenses | 40 000 | |
| Sub-Total | | 520 000 |

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| | |
|--|------------------|
| Activity 4. Policy | |
| International Consultants | 480 000 |
| National Consultants | 300 000 |
| Expenses | 55 000 |
| Sub-Total | 835 000 |
| | |
| Activity 5. Institutional | |
| International Consultants | 220 000 |
| National Consultants | 115 000 |
| Expenses | 38 000 |
| Sub-Total | 373 000 |
| | |
| 1. Workshops activities 2,4 and 5 | |
| Workshops | 150 000 |
| Sub-total | 150 000 |
| | |
| 2. Monitoring/Review, Evaluation and Auditing | |
| Monitoring/Review, Evaluation and Auditing | 200 000 |
| Sub-total | 200 000 |
| | |
| 3. Contingency | |
| Contingency | 480 000 |
| Sub-total | 480 000 |
| TOTAL | 4,000,000 |

IMPLEMENTATION AND MONITORING

Implementation Arrangements

The oversight of the NDF project will follow the same institutional structure as the SPCR investments, which is based on Zambia's Climate Change Programme. The National Climate Change Secretariat (NCCS) under the Ministry of Finance (MoF) will take overall responsibility for coordination and execution of the project. The NDF project will be implemented by the Road Development Agency, with oversight from the Ministry of Transport, Works, Supply and Communications (MTWSC).

Close cooperation between RDA, the MTWSC and the NCCS will thus prevail in order to ensure that the various parts of the SPCR are coordinated and executed in a timely manner.

Procurement

To achieve the TA outcomes, an international consulting firm will be recruited, following the quality- and cost-based selection method to provide international and national expert services. The consulting firm will be engaged by the RDA in accordance with NDF Procurement Guidelines. All services are covered by this international consultancy contract, including costs of training, workshops, etc. Also procurement of goods/equipment for the project for Activity 2 will be carried out under this contract. Procurement will be advertised internationally, in Zambia and the NDF website, and procurement opportunities will be open for the global business community.

A detailed Procurement schedule shall be prepared soon after the signing of the grant agreement.

Services for audits and for monitoring/revisions and evaluation/s shall be procured by the RDA in accordance with NDF's Procurement Guidelines

Disbursements

NDF will disburse the grant through direct payment to the selected consulting firm against disbursement requests from the Ministry of Finance, endorsed by RDA. A detailed disbursement estimate will be prepared when the consultant firm has been recruited.

NDF will also pay directly to the auditors and monitoring/review and evaluation consultants.

Monitoring and Evaluation

The Road Development Authority will be responsible for monitoring of the project, reporting quarterly to the National Climate Change Secretariat and a copy of the report shall be submitted to NDF. The reporting on indicators shall be as specified in the Climate Investment Funds (CIF) work plan and its timeframes.

Within three (3) months of the NDF sub-projects completion the Road Development Agency will submit to NDF and the National Climate Change Secretariat a project completion report. The format and content of the report will be agreed latest a year prior to the completion of the NDF sub-project.

A mid-term review will be conducted half way through the NDF sub-project, and a final review will be conducted at the end of the NDF sub-project to establish the results. The results from these reviews shall be feed into the main SPCR mid-term and final evaluation.



Results Based Monitoring Framework

| Design Summary | Performance Targets | Means of Verification | Assumptions and Risks |
|---|--|--|--|
| Objective: To increase government's capacity to plan for and institutionalize a climate change resilient road transport sector. | | | |
| Activity 1. Vulnerability Assessment | Knowledge about the vulnerability of the transport sector is applied | Reference to assessments in key policy, planning and design documents | That awareness on the use and value of climate change information is increased and sustained; risk of assessments not used |
| Tasks | | | |
| 1. Identify value at risk of existing infrastructure to losses from climate change impacts, particularly floods and heat. This includes identifying vulnerable roads or inappropriate road technologies under climate change stressors | | | |
| 2. Identify how peoples' and places' current and future vulnerability to climate change inadvertently may be affected by the road transport sub-sector when infrastructure is built | | | |
| 3. Identify intermodal vulnerability (i.e. from road to maritime transport) and options for flexible transport modes during floods | | | |
| 4. Economic evaluation of road infrastructure damage due to past exposure to climate change in Zambia (including cataloguing by stressors e.g. precipitation and temperature on infrastructure such as paved and unpaved road surfaces) | | | |
| 5. Develop a vulnerability mapping of the road transport infrastructure and propose possible interventions | | | |
| Activity 2. Training | Capacity of key transport sector stakeholders is increased to identify how to reduce vulnerability to climate change in the transport sector | Workshop reports, interviews with key stakeholders during mid-term and final evaluations | That training targets intended stakeholders; risk of knowledge not being retained due to high staff turnover |
| Tasks | | | |
| 1. Training needs assessment to implement and sustain technical assistance activities | | | |
| 2. Develop a curriculum chart and syllabus for a programme of short courses on climate change vulnerability, impacts and adaptation for the road transport sub-sector, including carrying out training of trainers. | | | |
| 3. Identify centres of excellence for climate change, hydrology and infrastructure and develop program for cooperation with Zambian learning and research institutions | | | |
| 4. Develop longer term training on implementation of revised guidelines and tools for climate change adaptation in the transport sector to ensure re-skilling of sector professionals | | | |
| 5. Implement a short course on anti-corruption training using the WB "Red Flag Tool for the road sector" with relevant government staff and private construction companies | | | |
| 6. Workshop for Training and Testing for Institutional Readiness Scorecard, National Climate Impact Screening (NCIS), and Sectoral Guidelines | | | |
| Activity 3. Policy | Climate change is integrated into key policy documents such as the National Transport Master Plan, the ROAD SIP II addendum and the national transport master plan | National Transport Master Plan, ROAD SIP II addendum and National Transport Master Plan | That the project plays a key role in influencing change; risk that stakeholder consultations may not be held during implementation or that climate change is not included in relevant policy documents |
| Tasks | | | |
| 1. Review Policy provisions, institutional review and institutional readiness reports and develop recommendations for integration of climate change into the revised National Transport Policy | | | |
| 2. Based on assessment conducted as part of activity one, identify methods and make recommendations for integrating climate change adaptation into the national transport sector master plan | | | |
| 3. Propose revisions and criteria for incorporating climate change adaptation into the road sector investment framework | | | |
| 4. Hold Stakeholder consultations on policy and related reviews | | | |

| | | | |
|---|--|---|---|
| Activity 4. Technical (Development of Norms and Standards) | Technical guidelines and standards are developed to integrate climate change adaptation into road sector design and management | Guidelines/ standards documents. Presentation and discussions held during ASANRA meeting, project reports | That revised guidelines are in line with regional coordination efforts; risk that changes are not adopted for technical or political reasons |
| Tasks | | | |
| 1. Review experiences and lessons from other countries on design, construction and maintenance practices for climate change adaptation in the road transport sub-sector and identify guidelines suitable for revisions | | | |
| 2. Stakeholder consultations presenting findings to date, proposal for guideline revisions and assessments of institutional needs for implementation | | | |
| 3. Work within the SPCR pilot projects areas of the Barotse and Kafue sub-basins to develop optimal methodology which can be generalized for regional, national and local level design guidelines | | | |
| 4. Review designs of upcoming projects for climate change resilience to identify areas for revision of guidelines, standards and practices | | | |
| 5. Draft amendments to Guidelines are produced, which can used for planning, design, construction and maintenance of Trunk, Main, District, Urban, and Feeder roads | | | |
| 6. Test the application through pilot projects in the SPCR investment components or other roads projects as appropriate | | | |
| 7. Present recommended amendments to Association of Southern African Roads Agencies (ASANRA) through a Zambian hosted ASANRA workshop on climate change resilience in the road transport sector | | | |
| 8. Revise draft Guidelines based on experiences | | | |
| 9. Institutional review for implementation capacity needs to implement the Guidelines revisions as input into training program in Activity 1 and Activity 5 below | | | |
| Activity 5. Institutional Arrangements and Cooperation for the Adoption and Implementation of Road Norms and Standards | Road transport sector systems include climate change adaptation mechanisms | Workshop reports, agreements reached between agencies, road asset management reports | That there is willingness for greater inter-governmental cooperation; risk that products generated are not be used beyond the life of the project |
| Tasks | | | |
| 1. Develop institutional mechanisms for the adoption and implementation of Road Norms and Standards. The following are key stakeholders: Ministry of Transport, Works, Supply, and Communications, Road Development Agency Disaster Management and Mitigation Unit, National Council for Construction Zambia Bureau of Standards Ministry of Local Government and Housing | | | |
| 2. Strengthen road asset management systems at RDA to better target maintenance works towards vulnerable areas | | | |
| 3. Increase collaboration between disaster risk management, climate change and transport sector stakeholders on coordinated approaches to disaster risk reduction and prevention | | | |
| 4. Assessment of gaps and approaches for improving mobility during disasters and for disaster prevention by the road sector stakeholders, thereby strengthening institutional capacity for response | | | |
| 5. Enhance Output Performance Road Contracts (OPRCs) to include climate change resilience standards | | | |