The donkey radio shows: helping producers care for draught animals

RIU

Validated RNRRS Output.

In Kenya, weekly radio programmes have helped listeners to keep their precious donkeys healthy. Donkeys are a useful source of draught power, and poor families need to learn how to ensure that they stay healthy and have long working lives. Broadcasting to isolated rural communities also gave listeners the opportunity to ask specific questions about their own animals. And, recording the shows on CD-ROM provided a useful set of information that is being used around the world. The project outputs are already benefiting users in Rwanda, Tanzania, and Kenya. And to ensure that this very useful exercise can be reproduced in other countries, the project has produced a booklet explaining how to set up a radio show that will improve animal welfare.

Project Ref: **LPP11:**
Topic: **2. Better Lives for Livestock Keepers: Improved Livestock & Fodder**
Lead Organisation: **Kenya Network for Draught Animal Technology, Kenya**
Source: **Livestock Production Programme**

Document Contents:

Description, Validation, Current Situation, Current Promotion, Impacts On Poverty, Environmental Impact, Annex 1, Annex 2,

Description

LPP11

Research into Use
NR International
Park House
Bradbourne Lane
Aylesford
Kent
ME20 6SN
UK

Geographical regions included:

Kenya, Rwanda, Tanzania,

Target Audiences for this content:

Livestock farmers,

A.   Description of the research output(s)

1. Working title of output or cluster of outputs.
In addition, you are free to suggest a shorter more imaginative working title/acronym of 20 words or less.

The project for which the outputs are being described was referred to as:

Design of radio messages and programmes to improve donkey use, welfare and environment for transport and tillage in rural communities

Working title of the proposed project is:

Print and electronic media programmes, messaging and community participation to promote the welfare of work, companion, and food animals

2. Name of relevant RNRRS Programme(s) commissioning supporting research and also indicate other funding sources, if applicable.

RNRRS: NRIL: Livestock Production Programme (LPP): Attn. Wynn Richards.

Other sources of funding:
- Society for Protection of Animals Abroad (SPANA) of UK: *Attn. Jeremy Hulme*
- Brooke Hospital for Animals (The Brooke) of UK: *Attn. Bill Swann*

3. Provide relevant R numbers (and/or programme development/dissemination reference numbers covering supporting research) along with the institutional partners (with individual contact persons (if appropriate)) involved in the project activities. As with the question above, this is primarily to allow for the legacy of the RNRRS to be acknowledged during the RIUP activities.

The project R number was ZC 0235

Institutional Partners

Artesian Marketing
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*4. Describe the RNRRS output or cluster of outputs being proposed and when was it produced? **(max. 400 words)**.*
This requires a clear and concise description of the output(s) and the problem the output(s) aimed to address.
Please incorporate and highlight (in bold) key words that would/could be used to select your output when held in a database.

1. Recordings of Animal Welfare Experiences from end-users

The **radio messaging** programme was designed to have an **end-user feedback system**. Ordinary **donkey users** responded to questions aired each week, following a lecture or skit on a topical subject or issue (e.g. **myths about donkeys**, rabies and tetanus, caring for a donkey foal, recommended carting practice, feeding and watering etc.) The motivation to respond was the weekly prize in form of a booklet on **donkey welfare**, T-Shirt and Cap etc.

2. Web based messages of localised animal welfare situations and experiences

Various **recordings of the radio programmes** were translated into English and reproduced for world animal power and welfare enthusiast to listen to through a designated website. This made **Kenyan experiences in animal welfare** or lack of it to be available with key best-practice messages available in reproducible form.

3. Records of listeners real life experiences and feedback on animal welfare

Responses from listeners had more than answers to the weekly questions on **animal welfare**. Some called for clinical and other care attention for their animals, among other needs and support requests. All recordings were captured on CD-ROM and letters from listeners were responded to and filed appropriately. Unique or specialised **suggestions from donkey keepers and users** were given special attention and record emphasis.

4. Radio messaging for happy working equines: A Manual for Implementing a Radio Programme to Improve Equine Welfare

A toolkit type booklet of process experience and how to assist others venturing into production of radio messages for work animal welfare was produced in printed form.

5. What is the type of output(s) being described here?
Please tick one or more of the following options.

Product	Technology	Service	Process or Methodology	Policy	Other Please specify
X		X	X		Information exchange network

6. What is the main commodity (ies) upon which the output(s) focussed? Could this output be applied to other commodities, if so, please comment

The main output commodity was a Media based information network for **donkey welfare**. Radio messaging and even advancing to other electronic and print media, retaining the all-important innovative feedback system from users can be applied to the welfare of other animals, be they work, companion or food animals.

7. What production system(s) does/could the output(s) focus upon?
Please tick one or more of the following options. Leave blank if not applicable

Semi-Arid	High potential	Hillsides	Forest-Agriculture	Peri-urban	Land water	Tropical moist forest	Cross-cutting
							X

8. What farming system(s) does the output(s) focus upon?
Please tick one or more of the following options (see Annex B for definitions).
Leave blank if not applicable

Smallholder rainfed humid	Irrigated	Wetland rice based	Smallholder rainfed highland	Smallholder rainfed dry/cold	Dualistic	Coastal artisanal fishing
X	X	X	X	X		X

*9. How could value be added to the output or additional constraints faced by poor people addressed by clustering this output with research outputs from other sources (RNRRS and non RNRRS)? (**max. 300 words**).*

Radio messaging is a powerful tool for rural development often reaching 99% of the rural population in developing countries. Due to their government heritage (most pioneer radio stations are state run corporations) radio enjoys high credibility status. Outputs needing advanced and innovative information exchange with technology end-users can cluster with this output. Animal welfare is a subject of increasing concern in livestock use and marketing destinations worldwide. In recent days OIE has placed emphasis on handling of food animals in transport, (humane) slaughter etc. or marketing their products will be an uphill battle.
There are various ways of adding value to the radio messaging already initiated and continuing under The Brooke sponsorship:

- Address broader issues of animal welfare beyond donkeys and including other animals used for work, companionship and for food
- Advance into the welfare of wildlife, including animal human interactions and conflict

- Advance into print, television and outdoor media
- Translate radio messages into more local and international languages advancing the placement of the same on internet websites
- Utilise WorldSpace radio reaching pastoral communities in dry areas and even Vernacular and specialised FM Stations which are increasing in numbers
- Web based - programmes and archives(previous programmes available)
- Document the learning, experiences and disseminate on a regular newsletter labelled "Listeners voices"
- Facilitate centres for solutions in communities labelled "your answer"

Please specify what other outputs your output(s) could be clustered. At this point you should make reference to the circulated list of RNRRS outputs for which proformas are currently being prepared.

KENDAT outputs on this project could be clustered with projects with the following R numbers: R8428, R8349, R8429, R8281, R7401, ZB0380, R7637, R7425, R8213, ZC0177.

Validation

B.   Validation of the research output(s)

10. How were the output(s) validated and who validated them?

Please provide brief description of method(s) used and consider application, replication, adaptation and/or adoption in the context of any partner organisation and user groups involved. In addressing the "who" component detail which group(s) did the validation e.g. end users, intermediary organisation, government department, aid organisation, private company etc... This section should also be used to detail, if applicable, to which social group, gender, income category the validation was applied and any increases in productivity observed during validation (max. 500 words).

Following the support by NRIL/LPP and SPANA support to the KENDAT radio-messaging project, the project's success saw the Brooke Hospital for Animals continue to support the programme to-date. The fact that the project is 100% (52 weeks a year) supported by The Brooke today is a clear indication of its reported success.

- Outputs have been validated through letters received from listeners at an average of 60 letters per week. This is a large number considering that the people writing in are the rural poor investing heavily (some Ksh 30/-) per letter in a drudgerous snail mailing process. Listeners answer an animal welfare question at the end of each Thursday evening short lecture or skit (radio role-play) on a topical issue such as how to manage a donkey foal. Answering this question correctly gives end users a chance to win a prize. Processing the incoming written responses which are much more than simple answers to a weekly question is another form of validation conducted by Artesian Marketing Services.
- Telephone calls are also received and word of mouth feedback is entertained in different KENDAT and others' fora. Some rural people call KENDAT offices asking for help for abandoned donkeys and others call to report

donkey offenders. Many youth write in requesting donkey fan-club and other support. Some call in asking to be employed or even voluntary care-takers of troubled donkeys in their own localities.

- Several country buses and other country buses have been seen painted with the radio programme's slogan *"Mtunze Punda Akutunze"* ("Take care of your donkey and s/he will take care of you"). This is clear validation that an exciting programme is listened to around the country.
- Several daily press write-ups and features are observed. These voluntarily amplify KENDAT network messages through donkey welfare picture caption and sensitisation stories.
- Socio-economic groups addressed by the radio-messaging outputs are mainly moderate poor and extreme vulnerable poor who depend on work animals and especially the donkey to earn a living. The typical majority users have limited education, at best primary school level. However, retired civil servants, relocating into farming and other business in the rural areas are known to have made excellent donkey business. Both genders are represented. Radio message responses are typically 75% male and 25% female. Many women use donkeys but they may not be the most able, in time and resource to write in after a radio session.
- Productivity was manifested through more people reporting incidences of donkey abuse in their letters, and sometimes telling us of their village mates who are good or bad donkey keepers (see APPENDIX One).

11. Where and when have the output(s) been validated?
*Please indicate the places(s) and country(ies), any particular social group targeted and also indicate in which production system and farming system, using the options provided in questions 7 and 8 respectively, above **(max 300 words)**.*

- Messaging started in few areas of central Kenya in early 2003 and it was done in the local language and broadcast through a small footprint FM radio station. The systems of production and farming here is as marked in 7 and 8 above
- The target group is the low income wage earner. The validation came from the end users of information, the listeners.
- In September 2003 messaging assumed a wider national and regional reach by moving to the KBC – Kiswahili (language) station. Here, messages moved to an all rounded broadcast station that uses a combination of shortwave, medium wave and Frequency Modulation stations. This national coverage station helped to reach as far as Wajir, Lamu, Maralal, Tana , Rusinga Island and many others grossly remote villages of Kenya.
- As continuity of messaging became consistent, this year the validation of outputs has spread to Tanzania and Rwanda.

Current Situation

C.   Current situation

*12. How and by whom are the outputs currently being used? Please give a brief description **(max. 250 words)**.*

- §   Outputs are currently used by KENDAT to mainly improve on the radio programming through soliciting for views and opinions from the end users.
- §   End users often request past recordings to help them understand better or teach groups that they

belong to. Society for Protection of Animals Abroad (SPANA), a UK animal welfare trust ahs received copies of the translated recording and the (Ochieng and Kaumbutho 2006) Extension Approaches to Improving the Welfare of Working Equines manual for use in their upcoming radio programme for Mali in West Africa. Brooke equine welfare countries of Jordan, Egypt, Pakistan, India, Afghanistan, Egypt and Guatemala have also received the manual. India is at an advanced stage of starting their own radio programme after their CEO has visited KENDAT several times and with keen interest on learning how the radio programme is consucted.

§   As mentioned above some sessions have been translated and uploaded on the website, making them available for the world to access and learn from.

§   All broadcasts are regularly copied on CD-Rom. The recordings are then passed on to the Schools and Donkey User Clubs programme components, to use in their own club activities.

*13. Where are the outputs currently being used? As with Question 11 please indicate place(s) and countries where the outputs are being used **(max. 250 words).***

§   Outputs are currently being used in the entire nation of Kenya with evidence of use cutting across all climatic zones from the Humid Coast to the dry Northern and North Eastern parts of the country. Their use cuts through the rich agricultural farmlands of Western, Rift Valley and Central Kenya.

§   End-users tend to ask questions that relate directly to problems unique to their prevailing climatic conditions, donkey illnesses (like pneumonia in cold areas, over-grown hooves in wetter areas etc.). Other problems are such as , injuries caused by special rubber whips or by localised (area-specific) poor harnesses etc. The same end-users tend to validate the outputs against their traditional beliefs and mythology.

§   In Tanzania, end users have responded from Tanga and Mafia

§   Rwanda users have validated from Musandavia.

*14. What is the scale of current use? Indicating how quickly use was established and whether usage is still spreading **(max 250 words).***

- On a scale of 1-10 where 10 is maximum usage of outputs, Usage is between 4-5. While much has been done, a lot more needs to take place. This is because the radio messaging venture is a process and therefore a gradual behaviour change undertaking. The process involves a change in attitude against deeply rooted negative and age-old beliefs and myths. The radio messages challenge traditional "knowledge and beliefs" that were passed down by relatively credible but poorly informed sources. The process is bound to take time.
- Use of outputs was established within the first year. However, funds were limited and therefore the messaging was constantly interrupted by lack of funds. In some years like 2003/2004, programme were only able to be aired on 35 weekly episodes out of a possible 52 weekly sessions (translating to 2/3 of a year). When this happens, listeners fall out. Breaks make it difficult to build-in the much needed continuity. Regular and continuous messaging has been possible since the beginning of 2005 thanks to the Brooke.
- Since uninterrupted messaging, usage is definitely spreading. Tanzania 'Users' coming on board from February 2006 and the Rwanda Users came on board from May 2006. One can anticipate a regional spread as the neighbouring Southern Sudan and Somalia settle down politically. Both countries have a good fraction of Kiswahili speakers.
- The adoption of Kiswahili by African Union as a major language can further be expected to expedite the

spread of usage in the region.
- The current station of choice- Kenya Broadcasting Corporation has now been hooked to an independent satellite which has strengthened the reach to Congo-DRC in the west and, India to the east.

15. In your experience what programmes, platforms, policy, institutional structures exist that have assisted with the promotion and/or adoption of the output(s) proposed here and in terms of capacity strengthening what do you see as the key facts of success? **(max 350 words).**

§   Various nationally established platforms have assisted the radio messaging process. The presence of Kenya Society for Protection and Care of Animals (KSPCA) has helped despite using a punitive approach to engaging work, farm and companion animal abusers.

§   The independent media houses like Kenya Television Network, East African Standard and KBC (Channel 1) Television, and Nation TV have on their own initiatives brought to focus the need to take care of animals, transport them and treat them humanely. These platforms have addressed a different social grouping, namely, animal traders and transporters. While these persons cannot be classified as poor, they directly influence how the poor work with and handle their animals.

§   In terms of policy, there is a legal framework in place under Cap 360 of Kenyan laws. Despite being based on the punitive rather than animal welfare approach, both citizens and law enforcement agencies have had a basis to consider animal welfare. Cap 360 in currently under review and radio messaging is a key approach to introducing change about animal welfare.

§   The World Animal Health Organization (OIE) is currently addressing how trade animals are handled and the Western World will soon refuse to purchase animal products (meat, fish, poultry, eggs etc.) coming form animals that have been treated inhumanely in transport, slaughter etc.

§   Radio messaging has been backed by the well established KENDAT animal welfare schools and community donkey user activities. Furtherance of these structures to reach numerous other locations in Kenya and East Africa will strengthen the acceptance of the outputs described here.

In the Strategy for Revitalising Agriculture (SRA – 2004-2014), an off-shoot of the Economic Recovery Strategy for Wealth and Employment Creation (ERS – 2003-2007) of the current administration of the Kenya Government states under:

- Output 3.8 (pp97): Access to Quality Farm Inputs Increased: Activity Item 3.8.2 is: Develop modalities for increasing the capacity of farmer associations to access and manage the markets and marketing infrastructure by farmers and their organisations developed.
- Output 3.9 (pp99): Mechanization and Labour Saving Technologies Promoted: Activity Item 3.9.3 is: Promote Use of draught power where appropriate for land preparation and transport.
- Output 4.1 (pp105): Marketing of Agricultural Produce Strengthened: Activity Item 4.1.7 is: Providing an information network on market prices and opportunities through district information centres and farmer organizations.
- Output 5.2 (pp109): Rural Infrastructure (Roads, Electrification and Communication) Improved: Activity 5.2.4 is: Facilitate development and distribution of power and electronic communications to support private sector operations in rural areas and to facilitate access to information by farmers.
- Output 5.4 (pp111): Gender issues mainstreamed in Agricultural Development Plans: Activity Item 5.4.3 is: Engender new technology development and review old technologies to make them gender

appropriate.

- Output 5.5 (pp111): Accelerate Programmes for Youth Employment in Agriculture: Activity Item 5.5.4 is: Promote and support private sector to develop rural agro-industries and other enterprises for alternative employment to the youth.

A key existing platform for enhanced use of radio messaging is increased access to print and electronic media at local and even village level. Localised newspapers and FM radio stations, broadcasting in local dialects are on the increase.

Key facts of success:

- **Farmers need to engage with the private sector from a more winning position**: Informed farmers will make more direct demands on agro-industry and input and information suppliers.
- **Enhanced radio-messaging, assistance and training:** Radio is an excellent means to pass on new approaches and best practices for modern agriculture. Farmers believe in radio messages as gospel truth. Their participation needs to be made an attractive venture through their innovative engagement and fun-learning.
- **The role of the good practice scout:** who roves the country incognito rewarding and scolding animal users on welfare issues. This mystery person who is well known to radio listeners has propelled the adoption of outputs because of the reward system associated with the scouting process.
- In strengthening the current capacity, **establishing radio fan-clubs, other forms of feedback provision** e.g. text messaging (SMS) and emailing are being exploited as a way of reaching those communities where our current schools programmes and community activities are yet to reach.

Current Promotion

D. *Current promotion/uptake pathways*

*16. Where is promotion currently taking place? Please indicate for each country specified detail what promotion is taking place, by whom and indicate the scale of current promotion **(max 200 words).***

Active promotion is currently taking place in Kenya where:

- Radio messages creative direction, concept and content, programme material research and design take place. This part of the work is done by Artesian Marketing Services a local consultancy firm.
- Actual production in of the messages in studio is conducted by a partner consultancy firm, Platform Limited.
- Collection of feedback, analysis of content of the feedback, communication with the users and general administration of the radio programme needs is conducted by Artesian Marketing Services.
- The scale of current promotion in terms of production is 1x 10 minutes episode per week, 52 weeks a year.
- The scale of current promotion measured in terms of reach is national land mass coverage of the Republic of Kenya. This is a direct result of using Kenya Broadcasting Corporation (KBC) a National Service station of

widest possible reach.

- In active promotion is in all the other nations that are reached by this station. These include neighbouring Tanzania and Rwanda where we have received validation in form of listener write-in.

- Feedback (informal) from Kenyans working in South Sudan, Somalia and Uganda indicates that they receive KBC news loud and clear. This could infer that those interested in our radio messages can access then in those nations as well. In any case, KBC is linked regionally through Workspace - satellite radio.

*17. What are the current barriers preventing or slowing the adoption of the output(s)? Cover here institutional issues, those relating to policy, marketing, infrastructure, social exclusion etc. **(max 200 words)**.*

- **Social:** The most outstanding barrier slowing the adoption of the output is behaviour change in a people who are cultured to accept old-age wisdom passed down generations, orally and by practice. This is the way information has "always" been passed. This method creates a lot of room for myths to crop up. On donkey welfare particularly, myths are many and varied ranging from donkeys will die if not worked to that their dung causes Tetanus. Myths and taboos associated with the donkey are strong barriers that we need to be urgently removed through provision of correct information.

- **Policy:** needs to be comprehensive to cover work, farm and companion animals (and even wildlife) in all aspects e.g. their work, health care, disease outbreak control, human animal conflict, zoonotics etc. etc.

- **Infrastructure:** This is better in some areas than in others for example in obtaining feedback, listeners in areas around Nairobi (the capital city of Kenya) takes at most 3 days to send in their feedback while others from farther localities can take as long as three weeks to arrive. This is because of slow postal service mail process in the rural areas that do not have good road or other infrastructural networks.

- **Marketing:** While radio is the best single medium, it excludes those who may not be near a radio during the prime evening slot which was carefully selected based on best-broadcast-time feedback from listeners. It also excludes many of the extremely poor that cannot afford batteries for the radio. A multi-pronged approach is best, especially that which includes posters and billboards. One that also uses below the line support activities like fan clubs, regional scouts, community clubs etc.

- **Information:** Wider reach touching other media channels.

- **Price:** Radio as a media for disseminating information is expensive to project administrators and sponsors. Radio programmes are faced with inappropriate policies where both public and private radios stations are highly expensive. Local FM stations will eventually bring the price in the currently booming and competitive radio business venture. Currently, government, different companies and NGOs are telling farmers the same messages in different ways and with different degrees of creativity.

*18. What changes are needed to remove/reduce these barriers to adoption? This section could be used to identify perceived capacity related issues **(max 200 words)**.*

- **Social**: Radio-messaging needs to be sustained and to address issues of more animal and general rural and agricultural development. Repetition is any teacher's best weapon. Repetition helps bring conviction and hopefully sustained change of attitude that can lead to change of behaviour.
- **Policy:** Working with all stakeholders to bring into being a suitable policy. The recently formed partnership - Animal Welfare Action Kenya (AWAKE) will fast-track this endeavour.
- **Infrastructure:** Provide alternative means of message feedback hat overrides the weaknesses in infrastructure e.g. e-mails and mobile phone, text messages.
- **Marketing:** Multi pronged approach that goes as far as "personal selling" of the radio messages, facilitating access to simple equipment like donkey harnesses, hoof trimming gear etc.
- **Information:** Excerpts of the radio programmes can be summarised in the highly informative *Draught Animal News* newsletter which has circulated in the region from Edinburgh University for the last 7 years or more.
- **Price:** Policy changes are needed to enable not-for profit organization disseminate messages to the public without exorbitant prices. Partnership and collaboration between NGOs, Government and private sector would ensure cost effective broadcasting – by concerted efforts into issue-based broadcasting.

19. What lessons have you learnt about the best ways to get the outputs used by the largest number of poor people? (max 300 words).

- People learn best by demonstration. Seeing is believing. Poor people aspire and gravitate towards what they see the better-off in society have and put to practice. If the poor can be moderated to accept and use the outputs, they will inspire a larger number of their colleagues in a sustainable manner.
- Trendsetters need to be identified, encouraged and supported as catalysts to attract more poor adopters of the outputs. In this regard, the scouting role described earlier cannot be over-emphasized.
- Consistency and continuity pays. Messaging must be sustained in order to achieve better impact.
- Radio messages have to be interesting and covering a wide variety of end-users technology and advancement issues, so that they can remain interesting and dynamic enough to catch and retain wider audience.

Impacts On Poverty

E.   Impacts on poverty to date

20. Where have impact studies on poverty in relation to this output or cluster of outputs taken place? This should include any formal poverty impact studies (and it is appreciated that these will not be commonplace) and any less formal studies including any poverty mapping-type or monitoring work which allow for some analysis on impact on poverty to be made. Details of any cost-benefit analyses may also be detailed at this point. Please list studies here.

- No formal studies have been conducted in this area. However, informal interviews and direct feedback from listeners (see APPENDIX One) with users reveals a rise in daily income when they use their animals properly.
- Some users attribute a rise in standard of living to the work they have carried out with donkeys.

Some of them confess with a degree of emotion that their "wealth" is purely attributed to the business services of the donkey.
- Observations in KENDAT operational areas also indicate more homesteads owning a donkey than earlier years. Numbers of foals seen at KENDAT field days and donkey clinic camps is a good indicator of additional and real progress made.

21. Based on the evidence in the studies listed above, for each country detail how the poor have benefited from the application and/or adoption of the output(s) (max. 500 words):

- No formal poverty studies have been conducted.

- *What positive impacts on livelihoods have been recorded and over what time period have these impacts been observed? These impacts should be recorded against the capital assets (human, social, natural, physical and, financial) of the livelihoods framework;*
- *For whom i.e. which type of person (gender, poverty group (see glossary for definitions) has there been a positive impact;*
- *Indicate the number of people who have realised a positive impact on their livelihood;*
- *Using whatever appropriate indicator was used detail what was the average percentage increase recorded*

As mentioned in 20, no formal studies of impact of the Radio messaging has been conducted.

Environmental Impact

H. Environmental impact

24. What are the direct and indirect environmental benefits related to the output(s) and their outcome(s)? (max 300 words)

This could include direct benefits from the application of the technology or policy action with local governments or multinational agencies to create environmentally sound policies or programmes. Any supporting and appropriate evidence can be provided in the form of an annex.

- Animal welfare radio messaging quickly translates to work animals that are not only receiving better care but also some that are healthier and live longer. Healthy animals have more working hours and efficiency and their use can be diversified to include matters of environment protection such as conservation agriculture. Conservation Agriculture refers to farming with minimal soils disturbance, permanent soils cover and appropriate crop mixes in rotations that increase biomass and in situ soil life (fauna) enhancement and biodiversity.

- Donkey power passes the test and qualifies for categorisation as a "Green Energy" and a "Smokeless Technology". Farm animals themselves depend on renewable energy.

- Draught animals produce manure that can add to soil fertility and productivity. Radio messaging on welfare needs to be diversified to touch on the broad range of subjects including the environment. DAP and the recently introduced equipment for Direct Seeding hence environmental benefits of reduced greenhouse gas emission.

- Radio messages are very powerful for awareness creation, education and training among the rural poor. "Radios never tell lies and they carry experts'messages"! Use of radio messaging is very appropriate in creating environmental awareness. Basically disseminating best practice environmental conservation and management practices. Government policies on environmental conservation can be disseminated through the radio.

- Community empowerment through radio messaging is likely to improve people's way of life. For example, those who have been using firewood, charcoal would use alternative energy sources because they can afford them. This would save the environment a great deal through reduced cutting of trees for firewood and charcoal etc.

*25. Are there any adverse environmental impacts related to the output(s) and their outcome(s)? **(max 100 words)***

No adverse environmental impacts are foreseen. There is a chance that where animals have improved welfare and they are better fed as encouraged by radio messages. Grazing the animals more intensely can lead to a compromised environment. However the same radio messaging can be used to ensure the environment is protected.

*26. Do the outputs increase the capacity of poor people to cope with the effects of climate change, reduce the risks of natural disasters and increase their resilience? **(max 200 words)***

- Yes. The outputs increase the capacity of poor people to build-up economic resilience. This can only lead to enhanced preparedness to protect the environment and cope with the effects of climatic change if and when disaster strikes.

- With appropriate environmental conservation and management information as brought through radio, poor people are able reduce the effects of climate change; they are able to plant more trees, conserve soils and practice better farming methods to produce more food, conserve and manage water to avoid effects of floods and drought.

Annex 1

List of Key Abbreviations

ATIRI	Agricultural Technology and Information Response Initiative

BIAMF	Busia Integrated Agricultural Marketing Forum
CDA	Community Development Assistants
CDF	Constituency Development Fund
CFA	Community Forest Association
CGIAR	Consultative Group for International Agricultural Research
CIGS	Common Interest Groups
CP	Community Parliament
CPHP	Crop Post Harvest Programme
DAP	Draught Animal Power
DGAK	Dairy Goats Association of Kenya
EAGA	East African Growers Association
FD	Forest Department
FFS	Farmer Field School
GBM	Green Belt Movement
GOK	Government of Kenya
HCDA	Horticultural Crops Development Authority
ICIPE	International Centre of Insect Physiology and Ecology
IFRTD	International Forum for Rural Transport and Development
ILRI	International Livestock Research Institute
ITDG	Intermediate Technology Development Group
IUDD	Infrastructure and Urban Development Department
ILO/ASIST	International Labour Organization/Advisory Support Information Services and Training
ISAAA	International Service for the Acquisition of Agri-Biotech Applications
KACE	Kenya Agricultural Commodity Exchange
KARI	Kenya Agricultural Research Institute
KDUC	Kalama Donkey Users Clubs
KEFRI	Kenya Forestry Research Institute
KENDAT	Kenya Network for Dissemination of Agricultural Technologies
KHDP	Kenya Horticultural Development Programme
KHE	Kenya Horticultural Exporters
LAMP	Lari Agricultural Marketing Programme
LATF	Local Authority Transfer Fund
MDG	Millennium Development Goal
MTMO	Mwea Transport and Marketing Organization
NALEP	National Agriculture and Livestock Extension Programme
NGO	Non-governmental Organization
PA	Practical Action
PEN	Poverty Eradication Network
PIM	Partnership Innovation Model
RNRRS	Renewable Natural Resources Research Strategy
UNIDO	United Nations Industrial Development Organization
CIAT	International Centre for Tropical Agriculture
IITA	International Institute of Tropical Agriculture
AU	African Union

NEPAD	New Partnership for Africa's Development
CA	Conservation Agriculture
SARD	Sustainable Agriculture and Rural Development

Annex 2

Related documents

Click below to view the related information ....

[**PF_LPP11_Annex2.pdf**](PF_LPP11_Annex2.pdf)