Communicating climate change through radio programs in the Congo Basin

A guide to the preparation, monitoring and evaluation of science-policy dialogue radio programs

Merline Touko Tchoko

Alba Saray Pérez-Terán

Anne-Marie Tiani

Communicating climate change through radio programs in the Congo Basin

A guide to the preparation, monitoring and evaluation
of science-policy dialogue radio programs

Merline Touko Tchoko

Alba Saray Pérez-Terán

Anne-Marie Tiani

Working Paper 192

© 2015 Center for International Forestry Research

Content in this publication is licensed under a Creative Commons Attribution 4.0 International (CC BY 4.0), <http://creativecommons.org/licenses/by/4.0/>

DOI: <http://dx.doi.org/10.17528/cifor/005741>

Touko Tchoko M, Saray Pérez-Terán A and Tiani AM. 2015. *Communicating climate change through radio programs in the Congo Basin – A guide to the preparation, monitoring and evaluation of science-policy dialogue radio programs*. Working Paper no 192. Bogor, Indonesia : CIFOR.

Translation of: Touko Tchoko M, Saray Pérez-Terán A et Tiani AM. 2015. *Communiquer par la radio sur les changements climatiques dans le bassin du Congo: Guide d'élaboration et de suivi – évaluation du dialogue science politique radiodiffusé*. Document de travail 186

Photo by Merline Touko Tchoko and Bonne Anne Matomona

CIFOR
Jl. CIFOR, Situ Gede
Bogor Barat 16115
Indonesia

T +62 (251) 8622-622
F +62 (251) 8622-100
E cifor@cgiar.org

cifor.org

We would like to thank all donors who supported this research through their contributions to the CGIAR Fund. For a list of Fund donors please see: <https://www.cgiarfund.org/FundDonors>

Any views expressed in this publication are those of the authors. They do not necessarily represent the views of CIFOR, the editors, the authors' institutions, the financial sponsors or the reviewers.

Contents

Executive summary	v
List of Abbreviations	vi
Foreword	vii
Acknowledgements	viii
Introduction	ix
1 Planning and preparation	1
1.1 Idea and target audience	1
1.2 Editorial line	1
1.3 Program structure	1
1.4 Typical example – planning the “Changing Seasons” program	2
1.5 Summary	2
1.6 Tips and tricks	3
2 Program production	4
2.1 The production team	4
2.2 Production sequence	4
2.3 Selecting a panel	4
2.4 Typical example of a stock production: the case of “To the Rhythm of the Seasons”	6
2.5 Summary	7
2.6 Tips and tricks	8
3 Promotion and dissemination	9
3.1 Advertising and promotion	9
3.2 Promoting a radio program	9
3.3 Broadcasting a radio program	10
3.4 The case of “To the Rhythm of the Seasons”	10
3.5 Summary	13
3.6 Tips and tricks	13
4 Radio program monitoring and evaluation	14
4.1 Approaches	14
4.2 Monitoring and evaluation of “Changing Seasons”	14
5 Analysis of the radio program’s impact in improving community knowledge	17
5.1 Impact assessment methodology	17
5.2 Summary	18
5.3 Tips and tricks	18
6 Conclusions and recommendations	19
7 Bibliography	20
Annexes	21
Annex 1	21
Annex 2	22

List of figures and tables

Figures

1. Congolese national radio station editing suite.	5
2. Recording a French language program in Cameroon (left) and Recording a Lingala language program in Republic of the Congo (right).	7
3. Local language program content scientific validation meeting.	8
4. DVD cover for “Changing Seasons”.	12
5. Official handover of the DVD to His Excellency Henri Djombo, Republic of the Congo Minister of Forest Economy and Sustainable Development.	13
6. Monitoring and evaluation of a radio program in Brazzaville.	14
7. An online article.	15
8. Articles published in Brazzaville newspapers.	16
9. Screen capture. A. showing website traffic. B. the points of origin of visits to the COBAM website.	17
10. Population distribution by age and sex and Population distribution by education level and sex.	18

Tables

1. Summary of components of the radio program “Changing Seasons”.	2
2. Schedule of announcements promoting “Changing Seasons”.	11
3. Radio schedule for French language broadcasts of “Changing Seasons”.	11
4. Broadcast plan for local language radio programs.	12
5. Program activity analyses.	15

Executive summary

This document outlines the design, production, dissemination and evaluation stages of a radio program on climate change and forests in the Congo Basin. To provide a better understanding of the processes involved and to make its information more accessible, the document is divided into four sections: planning and preparation, production, promotion and dissemination, and monitoring and evaluation. The COBAM (Climate Change and Forests in the Congo Basin) project's experiences from French, Lingala, Kituba and Pidgin English language radio broadcasts between January 2013 and March 2014 are documented here for the benefit of others interested in doing similar work and learning from our experiences.

This work does not intend to be a substitute for a broadcasting house, but to present an

iterative process and a participatory approach to communication on climate change, made of success and failure, to open the way for closer future collaboration between scientists, politicians and the public through the medium of radio. Its aims are to encourage science-policy dialogue, analyze the different phenomena and challenges affecting forests and making dependent communities vulnerable, and to identify research and action priorities.

COBAM is implemented by the Center for International Forestry Research (CIFOR) under the African Development Bank (AfDB) grant to the Economic Community of Central African States (ECCAS) for financing the Congo Basin Ecosystems Conservation Support Program (PACEBCo).

List of Abbreviations

CIFOR	Center for International Forestry Research
COBAM	Climate change and forests in the Congo Basin: Synergy between adaptation and mitigation
COMIFAC	Central African Forest Commission
CRTV	Cameroon Radio and Television
FAO	Food and Agriculture Organization of the United Nations
ECCAS	Economic Community of Central African States
NGO	Non-governmental organization
PACEBCo	Congo Basin Ecosystems Conservation Support Program
UNDP	United Nations Development Program
DRC	Democratic Republic of the Congo
REDD	Reducing emissions from deforestation and forest degradation in developing countries
REDD+	Reducing emissions from deforestation and forest degradation, with sustainable management of forests, conservation of forest carbon stocks and enhancement of forest carbon stocks
ReRaC	Regional network of community radios for good governance and sustainable management of natural resources

Foreword

The Climate change and forests in the Congo Basin: Synergy between adaptation and mitigation (COBAM) project has been implemented by CIFOR since October 2010, under the African Development Bank (ADB) grant to the Economic Community of Central African States (ECCAS) for financing the Congo Basin Ecosystems Conservation Support Program (PACEBCo).

The overall objective of COBAM is to develop an appropriate reaction to vulnerability stemming from climate change in Congo Basin landscapes, by providing decision makers, practitioners and local communities with the information, analyses and tools needed to design and implement policies and projects for climate change adaptation and the reduction of carbon emissions in the forests, with equitable impacts and co-benefits on poverty reduction, the improvement of ecosystem services other than carbon, and the protection of livelihoods, traditional practices and local rights.

COBAM activities are organized into six components, the sixth of which is communication and training. The objective of this component is to communicate, share knowledge and build capacity at local, subnational and national levels regarding adaptation and mitigation in the forests of the Congo Basin in order to support the development of scientifically informed policies and practices.

In this context, the COBAM team developed a diversified strategy of knowledge sharing and capacity building grouped into the following two categories:

Non-media communication

List of activities:

- organizing science-policy dialogue workshops
- presenting the COBAM project and its results at workshops
- showing documentary films
- organizing discussion forums
- organizing competitions with awards for winners
- developing and maintaining public relations through formal meetings during which researchers and policy makers exchange points of view

- holding exhibitions
- providing promotional items: stickers, bags, pens, shirts, USB flash drives, etc.

Media and outreach

- posters
- flyers
- scientific articles
- press articles
- policy briefs and infobriefs
- documentaries
- television broadcasts
- creation and update of a contact list (more than 2500 contacts)
- creation and continuous update of project website <http://www.cifor.cgiar.org/cobam>
- Science-policy dialogue programs.

The main focus of this document is science-policy dialogues.

We recorded twenty-six radio programs between 2012 and 2013. These programs involved discussions on specific themes related to climate change and exchanges between panels made up of researchers, academics, government policy makers, practitioners, and NGO and civil society representatives chosen on the basis of their experience and background.

These discussions, held in French as well as several local languages, were recorded, produced and broadcast on national public, private and community radio stations.

This communication strategy targeted policy makers at the regional, national and local levels, civil society groups including environmental NGOs, the private sector, the media and local communities.

The aims of this document are to share our experiences of science-policy dialogues, and more importantly, to retrace the steps involved in order that others may benefit from the lessons we have learned.

Acknowledgements

We would sincerely like thank all those who have participated in the development of this guide in one way or another. We express our special gratitude to Alain Belibi, Joel Loumetou, Berenger Tchatchou, Bonne Année Matoumona and Flore Ndong.

Introduction

The effects of climate change are a threat to food security and human and societal development. These effects include rising sea levels; extreme climate events, such as cyclones, floods and droughts; a proliferation of mosquitoes, the emergence of rare diseases, a reduction in arable land, etc. Despite its low contribution to global warming, Africa is the most vulnerable to its effects (IPCC 2014). This vulnerability is due to communities' heavy dependence on natural resource-based livelihoods, and limited access to the technologies and infrastructure that allow climate predictions.

Adaptation and mitigation have emerged as two major climate change strategies, but they require material and human capacities not necessarily available in sub-Saharan Africa. However, participatory communication can help significantly in improving communities' knowledge and increasing their capacity to adapt to climate change (FAO 2010). It can respond to the need for knowledge and updated information among policy makers in the Congo Basin, and also allow the media and different audiences to better understand the climate phenomena that constitute additional burdens on the lives of communities and the development of the continent. Many communications channels, including websites, publications, newspapers, and conferences, have been tried to address the current situation. However, these channels are quite selective and often fail to reach national and local decision makers, practitioners and local communities. This failure is due largely to inappropriate means of communication and limited Internet access.

In the absence of basic amenities such as electricity and the Internet, radio remains the most accessible information channel for local communities as it is the most widespread and least expensive. Accordingly, CIFOR designed and disseminated a radio program entitled "To the Rhythm of the Seasons"¹ in Cameroon, with the aim of creating a platform for

communication and knowledge exchange between policy makers, scientists and the general public. For a period of one year, the first phase of the program was dedicated to raising audience awareness on concepts such as climate change, climate variability, vulnerability, adaptation, mitigation, REDD+ and synergy between adaptation and mitigation. After six months, CIFOR received letters of congratulations from partners and the public, as well as requests for further broadcasts of the program. These proposals and solicitations encouraged CIFOR to extend production to other countries in the Congo Basin. In response to requests from communities, CIFOR produced six Lingala language and four Kituba language broadcasts in the Congo, and four Pidgin English programs in Cameroon. These productions were the result of close and fruitful collaboration between state institutions in charge of forests and climate policies, academics, international and national NGOs, research institutions, civil society and local communities.

Rationale for producing a guide to climate change communication via radio

Up-to-date information on climate change is scarce in the Congo Basin. In addition, data are disseminated using complex language, which hampers the circulation of research results and decisions on climate change, thus widening the gap between information available at the global level and that circulating in the countries of the Congo Basin. In line with recommendations, a solution was to create a radio platform that involved scientists, policy makers and the general public. In addition to accessibility and the relatively low costs involved in radio deployment, CIFOR research carried out in 2014 on the impact of radio programs in improving communities' knowledge on climate change showed a 22.3% increase for people who had listened once to the CIFOR-COBAM produced radio program entitled "Changing Seasons". It also showed behavior changes in several other partners, including the media, government agencies and people who had collaborated in the production and dissemination of the program.

¹ "Changing Seasons" is a radio program on climate change and forests in the Congo Basin, produced by COBAM, implemented by CIFOR and jointly funded by the African Development Bank and the Economic Community of Central African States.

A guide developed from our experiences producing programs in French and local languages – Lingala, Kituba and Pidgin English – could therefore help those who wanted to follow this approach by minimizing costs and the risk of errors. We do not seek to substitute ourselves for a broadcasting house but for our work to be understood as an iterative process based on a participatory approach to communication on climate change, with its successes and failures, and paving the way for closer future collaboration between scientists, policy makers and the general public through the medium of radio.

Objectives and targets of the guide to climate change communication via radio

The overall objective of this guide is to present the various steps involved in implementing a radio program aimed at popularizing the concepts of climate change and forest protection, and regional policies and practices in all the countries of the Congo Basin.

More specifically, it is a question of:

- presenting step by step the processes involved in implementing a conventional radio program on climate change and forests in the Congo Basin
- disseminating lessons learned from our experiences during the production, dissemination and evaluation of "Changing Seasons"
- making our experiences accessible to those wishing to create radio programs on the environment and nature protection
- promoting communication via the radio, in order to explain climate change and Congo Basin forest concepts and terminologies to the public

- contributing to greater visibility of donor and COBAM partner activities and pilot projects involving synergy between adaptation and mitigation.

Targets of the guide

The guide targets:

- regional and local policy makers in Central Africa
- international and national development and conservation partners
- national NGOs and civil society
- the media
- researchers and students
- local communities
- the general public.

An overview of the guide

The guide details the steps involved in the implementation of a radio program on climate change and forests in the Congo Basin in respect to the rules for creating and realizing an audiovisual production. To provide a better understanding of the processes involved and to make its information more accessible, the document is divided into four sections:

- Planning and preparation
- Program production
- Promotion and dissemination
- Monitoring and evaluation.

Each section is illustrated with our experiences producing the radio program "Changing Seasons", and concludes with a summary and advice to relay lessons learned.

1 Planning and preparation

Planning refers to a collection of successive tasks that need to be accomplished in order to achieve a final goal, and in this case the proposed radio program². The path to follow is theoretical. Not only do all steps have to be clear and concise, they must also be visualized in terms of timeframes. It is only by integrating these different aspects that an effective and operational vision can be developed. Good planning helps define the type, format, content and editorial line of a radio program taking into account parameters such as budget, time of implementation, and human and material resources. In fact, everything begins with an idea.

1.1 Idea and target audience

Conceiving an idea is the first step of the planning process and constitutes the foundation for program design. An idea must be original, but should also respond to a need. Not only does the idea guide the production and realization of the program, it can also inspire the target audience to listen to it. Your target audience is a crucial consideration when planning and should be the focus for the program. Therefore, knowledge of the target audience must be comprehensive in order to establish an audience profile. Things to consider are:

- its level of education
- its area of activity
- its hours of leisure and availability
- its information channels
- its information needs.

Generally, the public is less appreciative of programs dealing with environmental issues and sustainable development than of programs dealing, for example, with news, celebrity lifestyles, music or movies. This fact is indisputable, as demonstrated by the lower numbers of articles on these subjects in Congo Basin media. A CIFOR study conducted from December 2005 to December 2009 showed that three of the major newspapers in Cameroon had published only 14 articles dealing with issues related

to REDD+ (Kengoum 2011). There is, therefore, a need to develop mechanisms that will not only interest and captivate the audience, but also arouse its active or passive participation. It is active when the audience has the possibility to intervene directly in the program by sending messages or e-mails, or by phoning in. It is passive when the audience listens to the program regularly without any intervention. In both cases, in order to stimulate audience interest and participation, it is necessary to focus on the idea and to transform it into questions such as:

- What do we want to achieve?
- For what end?
- What added value can the program provide to already existing ones?
- What will its impact on the target audience be?

When the answers to such questions are clear, one can go ahead with the editorial line.

1.2 Editorial line

In the context of this document, the editorial line is a guide that helps determine how the program is going to be produced. It takes into account the content, but also the format of the program. In addition, it also helps identify some specific elements of the preparation process, such as:

- type of program: thematic or musical
- objective: educational, entertainment, information, etc.
- style of the program: serious, casual, etc.
- format: magazine, documentary, debate
- panelists: reporters and guest speakers
- presenter.

1.3 Program structure

The structure is the set of elements for each program, which are laid out in chronological order. This set consists of a number of topics, their timings, entertaining music, content of each intervention and their sequence. The structure also highlights the broadcasting mode, i.e. direct or “ready to broadcast”, commonly designated in French by the abbreviation “*PAD: Prêt à diffuser*”. All these

² A program may contain several episodes relating to the same theme.

elements are recorded according to their sequence, in a document called “driver” (*“Conducteur” in French*). The name of the program should summarize the initiative, highlighting the type of program. A well-defined title or name relates as much as possible to the theme of the program and constitutes its first agent of promotion. For more impact, the title must be catchy, simple without being vulgar, and easy to remember.

1.4 Typical example – planning the “Changing Seasons” program

Our idea or main objective was to create a platform for information exchange and dialogue on climate change and forest protection issues among policy makers, scientists and the public. For complete ownership of the program by the different targets, emphasis was placed on a number of parameters from the dissemination of the first program. This feature is reflected in the choice of each element of the program in light of expected results. Table 1 below shows all the elements that helped create the identity of our radio program.

We designed a program articulated around a debate based on a documentary and a chronicle. We chose to combine several program types in order to benefit from the opportunities that each has to offer, but also to create intervals to allow the audience to catch and assimilate the message being conveyed. For example, a debate is an ideal platform for information exchange. For a successful debate, guest speakers

should have different viewpoints. Hearing different points of view captivates the audience and triggers a desire to participate. We encouraged participation by giving the floor to our audience, through a *vox populi*, a telephone line and a postal box.

The final step before program production was carried out at CIFOR. It aimed at identifying themes for each episode of the program, messages to convey, profiles of the experts and to make assumptions regarding recording times and dates. The objective was to write the texts for use as the basis for production. At the same time, working sessions with reporters helped define the angles of attack and editorial lines appropriate to the theme for the month, and to identify people to be interviewed for reporting and chronicling. After completing the planning and preparation stage, the second step was to engage in production.

1.5 Summary

Climate change is a very broad subject which cannot be covered in only a few programs. To set up a radio program on this theme, it is first of all necessary to define a clear and concise message to convey and to follow it through. One method for achieving this objective, and especially for captivating the public or target audience, is to introduce the subject in its universal aspect during the first episode – in this case the manifestations of climate change – before tackling complex aspects, such as measurement and verification of carbon stocks, REDD, etc.

Table 1. Summary of components of the radio program “Changing Seasons”.

Special feature	Criteria of choice	Expected results
Name of the program “Changing Seasons”	Simple, catchy	Easy to remember
Structure of the program	1 debate 1 documentary 1 chronicle	Platform for free expression
The presenter	<ul style="list-style-type: none"> Icon on the national and international scene Experience in moderating debates 	Media coverage of the program from the first broadcast
Themes	Climate change Congo Basin forests	Wide dissemination of information on the Congo Basin
Profiles of the speakers	Experts in climate, environment, natural resource management; policy makers; members of civil society and local communities	Ownership of the program by all layers of society

This presentation, which requires a comprehensive understanding of the audience's expectations from the radio program, is designed during the planning stage. This helps define all the steps to achieve, by identifying the target audience, type, format, content and editorial line of the radio program in terms of parameters such as budget, human and material resources and program implementation timeframe. It is only by integrating these different aspects that we can develop an effective and operational vision.

1.6 Tips and tricks

Do: always conduct research on the target audience before developing the project to ensure proper planning of a radio program on climate change and forests. Ignorance of the target audience will result in an unsuitable program.

Don't: plan a one- or two-hour program without breaks. Long programs on climate change without breaks are tiring and can easily cause the most assiduous listener to switch off despite the importance of the message being conveyed. Ideally, focus on programs of less than 30 minutes. Longer programs must be split into segments with breaks between each one.

Do: choose the right presenter, the choice of the presenter is essential. The presenter usually leads the episode and can stimulate or turn off the audience. An unprofessional presenter has little chance of being understood, even if the information being conveyed and the subject are of paramount importance.

2 Program production

Production refers to the set of tasks and people who help develop the program from its theoretical preparation and planning stage design.

There are two types of production:

- The production of live programs. These programs are broadcast only once and include news programs, interactive games with the public, etc.
- The production of set or stock programs. These programs are broadcast over a defined period. Stock production includes series, documentaries, reality shows, etc.

2.1 The production team

Whether it is a live or set program, good production relies on a well-defined team. This team varies depending on whether it is a radio or television program. In our case, adapted specifically to the economic conditions of radio stations in the Congo Basin, production teams comprised a producer, a director, reporters, and one or several sound recorders and editors.

The producer supervises all stages of production. He or she constitutes the technical focal point and ensures the availability of premises and equipment necessary for producing the radio program. The director studies the feasibility of the project and creates the technical sequences of the program according to the company or organization's format. Sound recorders accompany reporters to the field and, according to the theme, collect appropriate sounds for the program. The editor processes the data collected in the field, retaining only those parts necessary for realization of the program.

The sound or image treatment process is called "*dérushage*" in French production jargon. The editor prepares and assigns a visual or aural identity to the program with things such as jingles, announcement streams, special effects, etc.

In some "small" radio stations, the producer is often also the director. In larger ones, producers often make appeals to specialized scenarists and comedians, who have reporter profiles, to develop program manuscripts.

2.2 Production sequence

Production relies on rigorous organization. In the case of a live production, the producer is present in the studio and ensures elements pass according to the program director's instructions. For a delayed program, the "driver" is implemented at the time of transmission.

Overall, good production comprises the following tasks: choice of reporters, information collection, recording studio rental, and recording, editing and mixing.

2.3 Selecting a panel

Discussions between participants can sometimes become heated. Therefore, in selecting the composition of the panel it is essential to consider the issue at hand and also the requirements of radio.

2.3.1 Choose a theme for the episode

Prior to selecting a panel for the discussion, it is important to identify a theme that will stimulate debate and highlight differences of opinion. If we consider the following two formulations:

- Formulation 1: Climate Change: Does it exist?
- Formulation 2: Climate Change: Myth or Reality?

Formulation 1 is quite vague and is less challenging than Formulation 2, which will stimulate debate, and lead to exchanges, or even polemics between the panelists and among the public. In summary, a vaguely defined theme or poorly worded question reduces the scope for discussion, making the debate less interesting and exciting to the audience.

By contrast, a well-defined theme helps identify appropriate organizations concerned with the subject. In this sense, one of the approaches used was to subdivide episodes into different segments and assess speakers' interest in the themes addressed in order to find appropriate profiles. The theme "Climate Change: Myth or Reality?" could be processed in several segments with issues such as:

Part 1. Climate change, is it a myth or a reality?

Part 2. What are the causes and manifestations of climate change?

Part 3. What is being done and what still remains to be done?

Part 4. What are the lessons learned?

During the preparation of these segments, it is important to identify speaker profiles appropriate to the debate and the questions being asked: a climatologist to introduce and explain the climate phenomena; a climate change sceptic to demonstrate that these phenomena are not new and have existed since time immemorial and that people have always learned to live with them over time; a farmer to present the effects of climate change on his/her livelihood activities; a government representative to discuss the actions of the government; and a researcher to present the results of research. This list of profiles is only for illustrative purposes. The most important thing is to take diverse points of view into account when forming the panel.

Figure 1. Congolese national radio station editing suite.

Photo by Merline Touko-Tchoko

2.3.2 Compose the panel for the requirements of radio

In contrast to television where guest speakers may play on their physical appearance, their dress or their mannerisms to capture the public's attention, in radio everything relies on the voice and the manner of self-expression. Panelists should be chosen, therefore, based on their ability to convince using only their voice. A radio voice should be both captivating and authoritative without being aggressive, and have a hint of sensuality.

A simple and effective tip for assessing the quality of a person's radio voice is to listen to the person speaking, while trying to read a text or a newspaper. If you are able to remain focused on your reading without feeling interrupted by the person speaking, then you will need to look for another panelist.

2.3.3 Compose the panel according to the language of the program

A local language production is oriented toward a specific audience in the area where the language is spoken. The production must be adapted to the context, tradition and language usage of inhabitants in the area, but especially to answer the concerns of its target audience. To do this, it is important to consider the education levels, cultural habits and psychology of the audience before choosing the theme, and form the panel for the debate accordingly. The theme and the title of the program should enable the public to realize it would benefit from listening to it.

It is sometimes necessary to call in a regional patriarch who has a mastery of the language and knows the expectations of the populace in relation to the theme. As a presenter, the role of such a person would be to formulate the theme in a simple manner, making it easy to remember and pronounce, in line with everyday expressions from the region. The presenter could also help select the panel and translate program content. In addition to the above criteria, people selected for the debate must also have a perfect mastery of the language used in the production.

2.4 Typical example of a stock production: the case of “To the Rhythm of the Seasons”

2.4.1 Science-policy dialogue

Devoted to a very precise theme, each program aimed to disseminate information on climate change and forests in the Congo Basin. By creating space for iterative exchange, enabling scientists and policy makers to be mutually supportive, the main objective was, thanks to the science-policy dialogue, to get the panelists to analyze the different phenomena and factors undermining forests and making communities vulnerable. This was done in the context of identifying and prioritizing research or actions to be carried out.

2.4.2 Choice of themes

Themes should be chosen with the aim of shedding light on questions relating to important issues, such as climate change, adaptation and mitigation, forest management, the links between forests and climate change, vulnerability, etc. A complete list of our chosen program themes is shown In Annex 1.

2.4.3 Choice of speakers

Generally, those we approached to become speakers were quick to consent to appearing in the French language programs; however, there was some reticence with local language programs. Panelists were careful when translating technical terms, such as carbon dioxide and ozone layer into Lingala, Kituba or Pidgin English, and were encouraged to use complete sentences or illustrations for their translations. A complete list of speakers and participants is shown in Annex 2.

2.4.4 Moderator profile

The moderator is the key person in a debate program. He/she contributes primarily to the practical realization of program objectives, ensuring strict compliance with the theme during discussions, focusing on the theme of the debate and summarizing the interventions of others. In order to achieve this, a moderator must be intellectually alert, a good psychologist, possess an ability to summarize, a mastery of the language and impeccable diction. For the program “To the Rhythm of the Seasons”, we chose a well-known personality in the aim of positioning the program on the country’s national media landscape from its first broadcast.

2.4.5 Production team

A seven-person production team consisting of a program maker, a presenter, three reporters, a technical director, and an editor worked on the project to develop different episodes according to CIFOR themes and directives. Having determined the editorial line in relation to the theme of the month as well as the persons to be interviewed in the framework of reporting and chronicling, the reporters and sound recorder went to the field to gather information. The editor then processed the information in story, *vox populi* and chronicle form. One or two weeks before the broadcast date, selected panelists gathered in the CRTV radio station studio to take part in a debate.

2.4.6 Presentation of the program

Each episode contained various segments:

- Context: to explain the day’s chosen theme, and its importance at the national and international levels
- Problem study or debate: with the aid of the moderator, panelists analyzed the causes and consequences of the situation and the issues raised, and proposed possible actions in order to find appropriate solutions
- Reporting, *vox populi* and chronicling: these helped illustrate the reality of the phenomenon being described, giving voice to the actors concerned. These were also channels for community members to express themselves and make their voices heard.

Before recording

In order to avoid destroying spontaneity during the debate, even though the panelists had been provided with information well in advance, we only brought them together for small upgrade meetings an hour before recording began. These meetings helped relax the atmosphere, and allowed for the provision of advice on attitude in front of microphones, and the duration and content of interventions.

A concern with researchers and sustainable development actors is they often use complex language; abbreviations and acronyms to highlight their theories, and these generally go unexplained. In addition, they frequently underpin their ideas with complex statistics and figures. Such data, which may be vital in reports or during conferences, often complicates fluidity and the digestion of information. During meetings, speakers were advised to limit the use of complex language, and to use simple sentences and give examples that reflect the realities of daily life.

Figure 2. Recording a French language program in Cameroon (left) and Recording a Lingala language program in Republic of the Congo (right).

Photos by Merline Touko-Tchoko

During recording

The presenter/moderator outlined the theme of the day, introduced the participants, and then launched a game of questions and answers. To enliven the debate, the presenter would seek to highlight conflicts or differences of opinion. At the end of the debate, he/she would make a summary of the comments put forward and conclude by announcing the theme for the next program.

After recording

Using a storyboard, we proceeded to assemble and shape the program. The various audio tapes were cleaned up and combined, and music and sound effects were chosen and integrated into the mounting.

Validating Lingala, Kituba and Pidgin English language program content

Two provisions were made for authenticating the quality of information and data to be disseminated in the different languages.

Translated summaries of each recording

Presenters of programs in each of the languages were assigned the task of listening to recordings, summarizing their content and translating those summaries into French. The recording sessions were organized with audio translations sent to the CIFOR regional office in Yaoundé, for validation. This process, however, only allowed partial follow up on each program. To ensure for neutral, scientifically

sound opinion, a validation committee was put in place and assigned a date for validation.

Program content scientific validation meetings

In order to facilitate listening and validate the content of each local language recording, with the support of ministries in DRC, Republic of the Congo and Cameroon responsible for environment and climate issues, we identified experts with the necessary oral and verbal skills in Lingala and/or Kituba and Pidgin English.

The methodology adopted during meetings was to listen to each recording for errors to be corrected. Any errors were immediately cut from the audio files. The panelists subsequently validated the scientific content of data for broadcast in those languages. Overall, however, only a few errors were identified.

2.5 Summary

A program on climate change is very different to a sports or health program. Consequently, there are strict requirements for the choice of theme, choice of speakers and language of production. A well-formulated theme will help in securing responses to questions on important issues, such as climate change adaptation and mitigation, forest management, the links between forests and climate change, vulnerability, etc. A theme should also generate sufficient debate. Therefore, it is essential to ensure the panelists are representative of different viewpoints in order to generate vigorous debate.

Figure 3. Local language program content scientific validation meeting.

Photo by Merline Touko-Tchoko

Encouraging dialogue between scientists, policy makers and the public provides an opportunity for direct discussion between the different parties, and helps with identifying research priorities or advocating for action to be taken. It is important to have lists of messages to convey and the individual contributions of each panelist in relaying information. This is done during production, which, in general, refers to all the tasks and people involved in the realization of the program developed during

the planning and preparation stage. Production is carried out by a well-defined team, the composition of which will vary depending on whether the program is for radio or television. In general, a successful production will comprise the following tasks: choosing reporters, gathering information, renting a recording studio, and recording, editing and mixing. The finished result should be a program that is likely to improve people's knowledge on climate change after it has been broadcast.

2.6 Tips and tricks

Do: keep it simple in a local language radio discussion on climate change; sentences must be kept simple with practical examples drawn from everyday life or fables, rather than complex statistics and abbreviations, which can often be incomprehensible.

Don't: forget to mention author copyrights at the end of each program. This should be a short statement including the title of the program, the date and time of broadcast, the name of the sponsoring organization(s), potential partners, funders, etc.

Do: remember water generally clears voices. Always remember to distribute glasses of water to guest speakers along with notepads, pens and pencils for helping them note down ideas and plan their responses.

3 Promotion and dissemination

Communication on forests and climate change can help highlight the key roles played by forests and aid policy makers in the Congo Basin in making decisions in the interest of the planet and the populace based on the results of reliable research. This communication can take place through the media (i.e. newspapers, radio, television, cinema, Internet, publications and displays), and also through non-media activities (e.g. conferences, workshops, mailing lists, sponsorship, etc.). However, an infinite volume of political, economic, cultural and musical information passes through these channels for the attention of the public. This means communicators from organizations for sustainable development must develop innovative strategies and use advertising and promotion techniques widespread in the commercial environment in order to capture the interest of the public when providing information.

3.1 Advertising and promotion

Advertising and promotion are techniques generally used for commercial purposes. Promotion is used to produce a temporary advantage on a good or service in the context of increasing its use. The example of the slogan "two products for the price of one" or free trials are perfect illustrations of promotion techniques. As defined by Wikipedia, an advertisement is a form of mass communication, which aims to captivate the attention of a target (consumer, user, subscriber, voter, etc.) in order to induce it to adopt a desired behavior.

With the advent of new information and communication technologies, and the development of entertainment industries, advertising and promotion are no longer used only for increasing sales and consumption, but also for attracting the attention of the public and inducing changes in attitude or behavior. To strengthen their modes of action, promotion and advertising are frequently used together or even assimilated into one another. This is the case in sustainable development where the term "promotion" is preferred to "advertising".

3.2 Promoting a radio program

Before proceeding to the broadcasting or distribution of a new product, it is necessary to develop an effective promotion strategy. A new product can be promoted through workshops and conferences, or through the press, television, radio and Internet. In doing this it is essential to consider the target audience and the available budget. Radio is a very important medium for advertising as it is widely accessible to the public and remains less expensive. Promoting a radio program can be done through the media, and in this case through trailers and advertising spots. Non-media promotion, via mailing lists, public relations, etc. is another option. However, the most important thing is to define a clear strategy and schedule.

A promotion strategy is based on the principle of repetition, and on a single message bearing the values of the organization and the information to be transmitted. After verifying the content of an advertisement, its programming involves the establishment of a contract between the advertiser and the media used in its promotion. The costs involved will vary according to several parameters:

- *The character of information being conveyed* – it could be commercial, educational, political or religious. Information of an educational nature (health, environment, etc.) often enjoys exemptions or, very occasionally, programming free of charge.
- *Broadcast times* – advertising during peak listening hours, for example before or after information bulletins, is more costly.
- *The duration of the advertisement or the length of the message*
- *The number of times the advertisement is broadcast and its broadcasting schedule* – unit cost will be lower over a six-monthly than a weekly or monthly programming schedule.

In order to be effective, promotion should take place before and during broadcasting of the radio program.

3.3 Broadcasting a radio program

Broadcasting will involve a contract between the advertiser and the radio station. There are two types of contract to this effect: purchase of a spot, and sponsorship. In the case of a spot purchase, depending on the duration of the program (five minutes to an hour), a contract is drawn up between the purchaser and the radio station. The purchaser has exclusive rights over the spot purchased. To avoid disruption to their broadcasting schedules, radio stations rarely grant spots in excess of one hour.

The second type of contract involves sponsorship of an existing program. In such cases, a small section of the program is allocated to the advertiser. Unlike a spot purchase where the advertiser has exclusive rights over his/her space, sponsorship will respect the program's editorial line and the topic of the broadcast. Broadcasting rules are the same as those for advertising. The advertiser and the radio station will agree on broadcast times and schedules in consideration of availability and target audience.

3.4 The case of "To the Rhythm of the Seasons"

3.4.1 Program promotion

Promotion for the "To the Rhythm of the Seasons" program took place through media and non-media channels. Daily announcements began on CRTV and *Radio Environnement* a month before the first broadcast, with further reminders three days before each program was aired. Invitations to listen to the program were sent in parallel to 3000 contacts on the COBAM project mailing list.

Seizing the opportunity provided by conferences and national and regional workshops, we distributed more than 200 flyers promoting the program to participants, along with 300 USB flash drives containing copies of the radio episodes in addition to other products from the COBAM project. These were also distributed to partners, donors and the public.

3.4.2 Broadcast plan and promotion of "Changing Seasons"

Table 2 below lists all the actions carried out in promoting the radio program "To the Rhythm of the Seasons" in Cameroon and beyond.

3.4.3 Broadcasting

Following a month of promotion, the program was broadcast from 18:05 on the first Wednesday of each month on CRTV, which covers the ten regions of Cameroon. The program was repeated on Radio Environnement³ on Thursdays from 11:00 to 12:00, on 107.7 MHz.

Radio Environnement works in partnership with the network of environmental community radio stations (ReRAC)⁴, which it coordinates. The programs were also broadcast every Thursday from 16:00 to 17:00 on Radio NOLA (103.6 FM) based in CAR, and every Friday from 15:00 to 16:00 on Radio BISSO NA BISO (94.3 FM) based in Congo Brazzaville in the Pokola forest region. Table 3 below summarizes the French language program broadcast plan.

3.4.4 Program production and broadcast extension

Despite the fact the Congo Basin is predominantly francophone, a 2011 UNDP report shows that literacy rates in the countries of the region vary, but are generally low. In the desire to broaden geographical coverage of the program to other countries in the Congo Basin, and especially to meet the demands of the most disadvantaged communities and those most affected by climate change – who can sometimes only express themselves in their mother tongue – significant material and human resources were combined to bring together experts, and representatives of civil society, ministries and communities for debates in local languages. Several languages were selected and led to the production of six episodes in Lingala, four in simplified Kikongolo or Kituba and four in Pidgin English.

In order to reach communities living in remote areas of DRC and Republic of the Congo, we used national radio stations of the two countries along with community radio stations targeted on the basis of their Lingala and Kituba language broadcasts. To do this we distributed DVDs of the programs to the national and community radio stations listed in Table 4 below.

³ Radio Environnement is an initiative of the International Union for the Conservation of Nature (IUCN) in Yaoundé.

⁴ ReRAC - Regional network of community radios for good governance and sustainable management of natural resources

Table 2. Schedule of announcements promoting “Changing Seasons”.

Period	Radio station	Number of announcements per week	Number of announcements per day	Time of announcement	Other promotion
One month before the first broadcast	CRTV	7	Once a day	16:55 (before the 5 o'clock news)	Announcements via the CIFOR mailing list, and through workshops and distribution of flyers
	Radio Environnement	14	2	11:55 and 19:00	
During the broadcast period of “Changing Seasons”	CRTV	3	Mondays, Tuesdays and Wednesdays	16:55	Announcements via the CIFOR mailing list, and through workshops and distribution of flyers, as well as USB flash discs and CDs with program recordings
	Radio Environnement	14	Twice a day	11:55 and 19:00	

Source: Data collected from CRTV and Radio Environnement

Table 3. Radio schedule for French language broadcasts of “Changing Seasons”.

Radios	hour/day	Number of broadcasts
National station (CRTV)	First Wednesday of each month at 18:05	Once a month
Radio Environnement	Thursday 11:00 – 12:00	Four broadcasts and twelve repeat broadcasts
Radio Nola (CAR)	Thursday 16:00 – 17:00	Four broadcasts and four repeat broadcasts
Radio Bisso Na Bisso	Friday 15:00 – 16:00	Four broadcasts and four repeat broadcasts
Radio Magnificat	Afternoons and evenings	Four broadcasts
Radio Divouba		
Radio Brazza		
Radio Congo		
Radio rurale		
Voix évangélique		
ORTV		
MNTV-Radio		

Source: Data collected from Radio Environnement.

Figure 4. DVD cover for “Changing Seasons”.

Source: CIFOR ISG

Table 4. Broadcast plan for local language radio programs.

	Radio station	Country	Coverage	Estimated number of listeners
1	Radio Congo	Congo	Congo and beyond	3 million
2	Radio Voix Évangélique	Congo	Brazzaville and surroundings	3 million
3	Radio Divouba	Congo	Bouenza, Pool and Lékoumou divisions	750,000
4	MN Radio	Congo	Brazzaville and surrounding area	1 million
5	DRTV	Congo	Brazzaville and surrounding area	3.5 million
6	Radio Magnificat	DRC	Brazzaville and surrounding area	3 million
7	Radio Rurale Congolaise	Congo	80 to 100 km from Brazzaville	2000
8	Radio Communautaire Owando	Congo	80 to 100 km from Brazzaville	1500
9	Radio Brazzaville	Congo	Brazzaville and Kinshasa	1 million
10	Radio Communautaire Etoumbi	Congo	100 km from Brazzaville	1000
11	Radio Communautaire Zoutété	Congo	120 km from Brazzaville	1000
12	Radio TV Nationale Congolaise (RTVC)	DRC	75% of the national territory	20 – 25 million
	11 DRC provincial stations	DRC	Nationwide	20 – 25 million

Source: Data collected from each radio station by Merline Touko-Tchoko.

3.4.5 Distribution of DVDs to ministries and organizations

In Republic of the Congo and DRC, DVDs of the radio programs were distributed to the following:

- Ministry of Environment and Nature Protection (Republic of the Congo)
- Ministry of Forest Economy and Sustainable Development (Republic of the Congo)
- Ministry of Scientific Research and Technological Innovation (Republic of the Congo)
- Ministry of Environment, Nature Conservation and Tourism (DRC)
- Ministry of Renewable Energy (DRC).

3.5 Summary

Topics relating to climate change do not catch the public's attention as readily as those dealing

with celebrity lifestyles. With the advent of new information and communication technologies, and the development of entertainment and other industries, there is an urgent need for "green" organizations to attract public attention and cause a progressive change in attitudes and behavior. Before proceeding with the broadcast or distribution of a radio program on climate change, an effective promotion strategy must be put in place. This should be developed by considering target audience and available budget. Promotion can make use of newspapers, radio, television, Internet, posters, etc. In this case we used trailers and advertising spots. Non-media promotion can make use of mailing lists, conferences and workshops, public relations, etc. The most important things are to define a clear strategy and schedule. The promotion stage leads to dissemination, which must be able to reach a wide audience. National radio stations can help achieve this goal in each country. Another approach is to use community radio stations or radio networks to reach target audiences in more remote areas.

Figure 5. Official handover of the DVD to His Excellency Henri Djombo, Republic of the Congo Minister of Forest Economy and Sustainable Development.

Photo by Bonne Année Matoumona

3.6 Tips and tricks

Do: be aware that community radio networks are of paramount importance in disseminating programs on climate change to target audiences in remote areas. It is a good idea to develop a list of community radios located in areas to be covered and to work with them in broadcasting information.

Don't: forget to carry out a study of the target audience before choosing the time and medium for broadcasting the program. In the case of discussions on climate change, late hours should be avoided.

Do: develop a mechanism for gathering reactions and feedback on the program. Such data will help when assessing activities.

4 Radio program monitoring and evaluation

Figure 6. Monitoring and evaluation of a radio program in Brazzaville.

Photo by Bonne Année Matoumona

In radio communication, a thorough knowledge of the audience helps develop mechanisms to carry out the monitoring of a radio program (Aspinall 1972). Monitoring and evaluation help refine the conceptualization and planning of the dissemination of a radio program according to its objectives. Two approaches are used for evaluation: the quantitative approach and the qualitative approach. These approaches are not opposed, but rather complementary, since they offer different information. They can be applied at different times depending on objectives, including before, during and after the broadcast of a radio program (Pérez-Terán et al. 2014).

4.1 Approaches

4.1.1 Quantitative approach

This approach helps to determine measurable aspects, i.e. obtain accurate and representative figures on various aspects of the radio program, including percentages of people listening to the program, their typology, how often they tune in, percentages of people influenced by the program, etc. It is often difficult and expensive to collect this type of

information, due to planning constraints on those responsible for radios. However, there are some adapted techniques, as noted below.

4.1.2 Qualitative approach

This approach provides additional information to that obtained through the quantitative approach, and includes audience preferences, the quality of the message conveyed to the audience, etc. For this, it is possible to use more active methods where a researcher moves to interview the target audience on specific issues, either individually or in a group. More passive methods are also possible, where the public is given the opportunity to respond according to its needs, through channels like postal mail, electronic mail or telephone calls.

4.2 Monitoring and evaluation of "Changing Seasons"

The program "Changing Seasons" was monitored and evaluated using qualitative and quantitative approaches at three levels: its activities, the interest from partners and its impact on beneficiaries.

4.2.1 Monitoring and evaluation of the program at the activity level

This evaluation was carried out by the CIFOR team with the objective of assessing how appropriate the use of radio was for disseminating information on climate change and forests in the Congo Basin. To do this, the team developed activities with specific indicators as summarized in Table 5 below.

4.2.2 Monitoring impacts and outcomes

The aim here was to analyze the reactions of the public and the influence the radio programs had on their attitudes and behavior (Pérez-Terán et al. 2014). To do this, the CIFOR team prepared a system for monitoring the different media used during the broadcast phases of the different radio productions, and collected data on listener numbers from radio stations. The team collected information on requests from the media and education institutions,

Table 5. Program activity analyses.

Activity	Indicator
Analysis of the number of households with access to a radio	% of people with a radio
	% of people with access to the Internet
Geographic analysis of the number of people reached by information presented by language	Number of inhabitants per country and per province
Analysis of web traffic	Number of people accessing the website
Analysis of the numbers of people listening to each radio program	% of listeners
Analysis of the geographical coverage of radio stations	Radio data
Choice of topic by CIFOR researchers for each program according to its importance	Pertinence of the topic
Choice of speakers for each debate	Profiles of speakers

Source: Pérez-Terán et al. 2014

Figure 7. An online article.

Source: <http://www.adiac-congo.com/>

on articles devoted to the radio program and on the behavior of visitors to websites containing the program.

Overall, the program succeeded in bringing about changes at the media, university and local community levels. The team also set up a database of requests for repeat broadcasts, and received a total of 41 requests from national and community radio stations. It also received a request from the University of Buea in Cameroon to train its students in the use

of radio for raising awareness and capacity building on topics relating to climate change in rural areas.

In addition, articles on the program were published in newspapers and of the websites of various media and partners, as evidenced by the following links:

- http://www.lesdepechesdebrazzaville.fr/flex/php/simple_document.php?doc=20140321_DBZ_DBZ_ALL.pdf
- <http://www.adiac-congo.com/content/changements-climatiques-un-support-radiophonique-diffuse-en-langues-locales-9481>

Figure 8. Articles published in Brazzaville newspapers.

Source: Journaux La Dépêche de Brazzaville, L'Observateur, La Semaine Africaine

- <http://pfbcb-cbfp.org/actualites/items/CIFOR-COBAM-FRFR.html>
- PFCB, COBAM-CIFOR-PACEBCo : *Au rythme des saisons* ("Following the Changing Seasons": Show no. 1-Climate Change: Myth or Reality? http://pfbcb-cbfp.org/news_en/items/CIFOR-PACEBCo-COBAM-FR.html
- PFCB, 2013, «CBFP induction workshop site», <http://www.pfbcb-cbfp.org/accueil.html> <http://ccr-rac.pfbcb-cbfp.org/accueil.html>

Meanwhile, 150 people listened to the program on *SoundCloud*, with a further 29 people downloading it.

4.2.4 Traffic on the COBAM website

The program "Changing Seasons" was posted on the COBAM project website. A website traffic analysis system provided data on a global scale and by subsection. We analyzed traffic on the site after creating the radio program section. In total, the site received 12,328 visits from across the world, including large numbers from Indonesia, Cameroon and the United States. However, unreliable Internet access hindered visits from other countries in the Congo Basin.

4.2.3 Partners and the public

We received more than 40 messages of congratulations and encouragement from the public and partners, including the Central Africa Forests Commission (COMIFAC) and the Ministry of Forests and Wildlife in Cameroon. The Congo Basin Forest Partnership (CBFP) published two articles on the 24 June and 16 August 2013 CIFOR-COBAM radio programs on its website. These are available at:

5 Analysis of the radio program's impact in improving community knowledge

This analysis involved a quasi-experimental survey of a representative sample of our target audience, i.e. rural communities (Pérez-Terán et al. 2014). The aims were to evaluate community understanding of the messages conveyed in the program, the evolution of knowledge among target audiences and the added value of the program on audience understanding. Due to a lack of material resources for carrying out assessments by program and by language, only the Lingala language program was chosen for analysis.

A site was chosen on the basis of the local language, the size of its population and its accessibility. A sample of at least 60 Lingala speaking residents was necessary. The evaluation took place in Ignie, a village 40 km away from Brazzaville in the Republic of The Congo with a population of 4000 inhabitants. Distribution of the populace by age, sex and education level is shown in Figures 12 and 13 below.

5.1 Impact assessment methodology

The approach adopted was the micro-econometric-scale impact assessment first formulated by Rubin (1974). A combination of two groups was used with "witness" and "control" groups each made up of 30 participants. The two groups were evaluated before and after intervention using double difference methodology. Three-phase evaluations helped determine the knowledge of the groups, followed by deliberate exposure to the radio program, a waiting period, and evaluations of how knowledge had evolved in each group. In doing this the team used individual questionnaires comprising simple questions on forest and climate change issues.

Study results showed significant improvements in the quality of responses, which are accurate to 46.8%, with 22.3% attributable to the radio program.

Figure 9. Screen capture. A. showing website traffic. B. the points of origin of visits to the COBAM website.

Source: Google Analytics

Figure 10. Population distribution by age and sex and Population distribution by education level and sex.

Source : Pérez-Terán et al. 2015

5.2 Summary

Monitoring and evaluation of a radio program on climate change can be done using a quantitative approach by recording the numbers of listeners and radio stations broadcasting the program; and a qualitative approach by gauging audience reactions to the program, how much their knowledge has improved after listening to the program, letters, emails, phone calls, etc.). To do this, studies can be conducted at the activity, achievements and results levels. A survey of a representative sample of the populace is important. Such a survey can involve a “witness” group, and a “control” group made up of people who have not listened to the program. The survey can also provide a scientific measure of how the radio program has improved community knowledge. The choice of questions, witness and control groups for the evaluation are key to its success. Therefore, it is essential to involve climate change experts in the development and implementation of the monitoring process.

5.3 Tips and tricks

Do: always develop a monitoring and evaluation system before broadcasting a program, though it is possible to rely on feedback from the audience, donors and partners for an overview of the program’s impact.

Don’t: neglect to respond to any letters, emails, or queries received. Responding to messages creates a direct link with the audience and encourages them to listen to the broadcast.

Do: with the collaboration of experts and local people fully conversant in the language used conduct a survey to ensure the message conveyed in the program is accessible to the audience.

6 Conclusions and recommendations

Scientific information on climate change often uses language that is inaccessible to local communities in the Congo Basin. The radio program initiative was aimed at addressing and improving this situation. This guide is presented in a theoretical manner. It outlines the steps involved in realizing and evaluating a radio program, with practical examples drawn from our experiences producing "Changing Seasons". The aim of the guide is to help establish science-policy dialogues between climate change actors in the region, with special attention paid to local communities.

Production of the program brought together 43 participants from various backgrounds: researchers, academics, civil society, and local communities, and was coordinated by the COBAM project team. In its entirety, the process took fifteen months, and the resulting recordings led to the production of ten programs in French, six in Lingala, four in Kituba and four in Pidgin English. These programs were broadcast by national radio stations in Cameroon and the Congo. Monitoring and evaluation took place throughout the production process. There were 40 requests for repeat broadcasts, and the program was listened to online more than 700 times. Surveys

revealed a 22.3% increase in knowledge among local people who listened to the program.

It is worth noting that planning constitutes the most important stage in producing a radio program on climate change and forests. It helps define all the steps to follow in a clear and concise manner, as well as their monitoring and evaluation. The biggest hurdles encountered were budget constraints, and some experts and scientists being reluctant to participate in discussions for the programs. Secrets to the success of such programs are initiating dialogues with all stakeholders in a timely manner and taking the available budget into account when designing the project.

This science-policy dialogue and capacity building experience has affected a large number of individuals. However, initiatives like this one are too infrequent and do not run long enough to produce any lasting impacts. We strongly recommended that such programs be broadcast regularly over longer timeframes and have greater geographic coverage. In addition, they could be extended to other languages commonly spoken in Central Africa, such as Ffulde or Kiswahili.

7 Bibliography

- Acunzo M and Protz M. 2010. Collaborative change: A communication framework for climate change adaptation and food security. Food and Agriculture Organization of the United Nations (FAO), Rome.
- Angelsen A. 2008. Moving ahead with REDD: Issues, options and implications. pp. 93-120. CIFOR, Bogor, Indonesia.
- Aspinall R. 1972. *Guide pratique de la production radiophonique*. 161p. Unesco, Paris.
- Carden F, Smutylo T and Earl S. 2001. Outcome Mapping: Building Learning and Reflection into Development Programs. International Development Research Centre, Ottawa.
- Cifor. 2014. Increasing climate change knowledge through the Radio: Results from three countries in the Congo Basin. Working paper, CIFOR, Bogor, Indonesia.
- Cinéours. 2014. Accessed on 10 May 2014 at: <http://www.cineours.com>.
- De Wasseige C, Devers D, de Marcken P, Eba'a Atyi R, Nasi R and Mayaux P. 2009, *Les forêts du bassin du Congo – État des forêts 2008*, Publications Office of the European Union, Luxembourg, 426 p. ISBN 978-92-79-132 11-7, doi: 10.2788 /32456.
- Fajet. 2012. Conception d'émission. Accessed on 26 May 2014 at: http://fajet.net/conception_emission.php. Last updated on 01/03/2012.
- FAO. 2010. Collaborative change: A communication framework for climate change adaptation and food security. Food and Agriculture Organization of the United Nations (FAO), Rome.
- ICS (Unité d'ingénierie des contenus et savoirs). 2014. *Expression de besoin, description du processus de réalisation d'une émission radio* Accessed on 18 August 2014 at: <http://ics.utc.fr/c2m/DOCS/L4a/html/co/0201DescRealisation.html>.
- IPCC. 2014. Climate Change 2014: Impacts, Adaptation and Vulnerability. Technical Summary. Working Group II report to the Intergovernmental Panel on Climate Change (IPCC), Geneva, Switzerland.
- Kamana Kaj A. 2010. *La pratique de la promotion des ventes d'une entreprise commerciale (cas de Jambo Mart)*, http://www.memoireonline.com/05/12/5868/m_La-pratique-de-la-promotion-des-ventes-d-une-entreprise-commerciale-cas-de-Jambo-Mart5.html. Accessed on 10 September 2014.
- Olivier Zeitouni Resources. 2012. Media and non-media communication. Accessed on 5 September 2014 at: http://fr.slideshare.net/Olivier_Z/la-communication-mdia-et-hors-mdia-14027894 posted online on 21 August 2012.
- Pérez Terán AS, Tiani AM, Touko-Tchoko M and Tchatchou B. 2014. Testing the Influence of Radio Programs on Climate Change Knowledge: A Pilot Experience from the Congo Basin. Working paper. Center for International Forest Research (CIFOR), Bogor, Indonesia.
- PFBC. 2013. Site de la conférence d'ancrage du PFBC (Partenariat pour les Forêts du Bassin du Congo), Brazzaville, Republic of the Congo. Accessed on 31 December 2014 at: <http://ccr-rac.pfbc-cbfp.org/>.
- PFBC. 2013. COBAM-CIFOR-PACEBCo: To the Rhythm of the Seasons: Show No. 1 - Climate Change: Myth or Reality?" Brazzaville, Republic of the Congo. Accessed on 31 December 2014 at: http://pfbc-cbfp.org/news_en/items/CIFOR-PACEBCo-COBAM-FR.html.
- Rubin DB. 1974. "Estimating causal effects of treatments in randomized and non-randomized studies. Journal of Educational Psychology, 66, 5, pp. 688-701.
- Wikipedia. 2014. <http://fr.wikipedia.org/wiki/Publicité%C3%A9><http://fr.wikipedia.org/wiki/Publicité%C3%A9> Accessed on 20 October 2014.

Annexes

Annex 1

List of program themes

Changing Seasons (French language programs)

Number	Themes
01	Climate Change: Myth or Reality? (1)
02	Climate Change: Myth or Reality? (2)
03	Relationships between Forests and Climate Change (1)
04	Relationships between Forests and Climate Change (2)
05	Pollution, Forests and Climate Change
06	Forests and Climate Change
07	Sustainable Management of Congo Basin Forests
08	Vulnerability of Local Populations to Climate Change
09	Impacts of Climate Change on Biodiversity
10	Impacts of Climate Change on Agriculture

Mbongwana Ya Ntango (Lingala language programs)

Number	Themes
01	Climate Change: Myth or Reality?
02	Causes and Consequences of Climate Change
03	Reaction to Climate Change
04	Relationships between Forests and Climate Change
05	Pollution, Forests and Climate Change
06	Climate Change Mitigation and Adaptation

Nsobolo Ya Ntangu (Kituba language programs)

Number	Themes
01	Climate Change: Myth or Reality?
02	Causes and Consequences of Climate Change
03	Relationships between Forests and Climate Change
04	Climate Change Mitigation and Adaptation

Tori for Climate Change (Pidgin English programs)

Number	Themes
01	Change for climate na true or na wayo? (1)
02	Change for climate na true or na wayo? (2)
03	Link between climate change and forest
04	For make change for climate no over hambok we

Annex 2

List of participants in the different programs

Changing Seasons (French)

- Alain Bélibi: journalist, columnist, Cameroon
- Dr. Joseph Amougou: climatologist and climate change focal point, Cameroon
- Dr. Anne Marie Tiani: COBAM project coordinator, Cameroon
- Dr. Denis Sonwa: CIFOR researcher, Cameroon
- Wilfried Pokam: physics lecturer at the University of Yaoundé, Cameroon
- Pierre Abé: COPAL coordinator, Cameroon
- Prof. Paul Tchawa: head of the geography department and vice lecturer at the University of Yaoundé, Cameroon
- Prof. Roger Ngoufo: director of Cameroon Environmental Watch (CEW) and Chairman of the General Committee of UICN Members, Cameroon
- Michel Ndjatsana: environmental expert with PACEBCO and COMIFAC climate change focal point, Cameroon
- Dr. Richard Eba'a Atyi: forester and CIFOR regional coordinator, Cameroon
- Clorine Mokom Fumbingula: REDD focal point representative, Ministry of Environment, Nature Protection and Sustainable Development (MINEPDED), Cameroon
- Melie Monnerat: African Model Forest Network (RAFM) research coordinator, Democratic Republic of the Congo
- Séraphin Mballa: Union for the Emancipation of Indigenous Women (UEFA), Bukavu, Democratic Republic of the Congo
- Dancilla Mukakkaamari: coordinator with the Rwandan Ecologists' Association (ARECO-RWANDA NZIZA)
- Juan Abeso Ondoe: National Institute for Forest Development and Protected Areas (INDEFOR), Equatorial Guinea
- Gérard Sindemo: chair of the Southeast Cameroon Local NGO Network (ROSE), Cameroon
- Alba Saray Pérez Terán: CIFOR researcher, Cameroon
- Louis Bernard Cheteu: CIFOR-COBAM pilot project mentor, Cameroon
- Bernard Njonga: agronomist, Cameroon
- Eugène Loh Chia: environmentalist and CIFOR researcher, Cameroon
- Okala: community member, Cameroon
- Dr. Rachid Hanna: resident representative of the International Institute of Tropical Agriculture (IITA), Cameroon
- Norbert Sonne: representative of the World Wildlife Fund - WWF, Cameroon

Mbongwana Ya Ntango (Lingala language programs)

- Laurent Botseke: journalist, columnist and Lingala expert, Republic of the Congo
- Dr. Norbert Yamba Yamba: tropical forest management specialist, civil society representative, Republic of the Congo
- Dr. Georges Claver Boundzanga: REDD coordinator, Republic of the Congo
- Dr. Adelaïde Itoua: climate change focal point, Republic of the Congo
- Prof. Joël Loumeto: Director General of the Environment with the Ministry for Environment, Republic of the Congo
- Prof. Jean Ndembo: geographer, lecturer at University of Kinshasa and representative of the Democratic Republic of the Congo Ministry for Environment

Nsobolo Ya Ntangu (Kituba language programs)

- Ghozal Nzoko: journalist, Republic of the Congo
- Prof. Bouna Clobite Bouka: lecturer-researcher with Marien Ngouabi University, scientific research adviser, Ministry of Scientific Research, Republic of the Congo
- Dr. Joseph Badevokila: environmental advisor to the presidency in Republic of the Congo, associate consultant representing Republic of the Congo
- Jean-Pierre Makita Ruffin: CONADEC (National Convention of Development and Environmental Associations and NGOs in Congo), civil society representative, Republic of the Congo
- Mbemba née Mangombo: community member, Republic of the Congo

Tori for Climate Change (Pidgin English programs)

- Mbah Peter Nforsi: journalist, Cameroon
- Prof. Paul Tchawa: head of the geography department and vice lecturer at the University of Yaoundé, Cameroon
- Dim Dim Rose: teacher, Cameroon
- Echaw Gabriel Bachange: teacher, Cameroon
- Gervais Didier Yontachang: meteorologist, Ministry of Transport, Cameroon
- Dr. Ojuku Tiafack: course teacher, University of Yaoundé, Cameroon
- Kaah Promise Menang: meteorologist, Cameroon

CIFOR Working Papers contain preliminary or advance research results on tropical forest issues that need to be published in a timely manner to inform and promote discussion. This content has been internally reviewed but has not undergone external peer review.

Updated information on climate change are lacking in the Congo basin. Moreover, available data are worded in a coded language that impairs their use in decision-making and thus contributes to increase the gap between the information available at the global level and those circulating in the region. This work aimed at assessing the mechanisms of dissemination of scientific information in Central Africa in order to adopt the information channels and languages adapted to various stakeholders, according to their abilities and needs. It is in this context that radio platforms bringing together scientists, policy makers and the public have emerged in 2013 and 2014 in Cameroon and Congo.

This document presents the steps that have borrowed the 24 radio programs on forests and climate change in the Congo basin, including the design, the production, the dissemination and the evaluation. These steps have been carefully documented to ease the duplication of the experience. A systematization of this approach paves the way for closer collaboration and a better sharing of information between scientists, policy makers and the public.

RESEARCH
PROGRAM ON
**Forests, Trees and
Agroforestry**

This research was carried out by CIFOR as part of the CGIAR Research Program on Forests, Trees and Agroforestry (CRP-FTA). This collaborative program aims to enhance the management and use of forests, agroforestry and tree genetic resources across the landscape from forests to farms. CIFOR leads CRP-FTA in partnership with Bioversity International, CATIE, CIRAD, the International Center for Tropical Agriculture and the World Agroforestry Centre.

cifor.org

blog.cifor.org

Fund

COBAM

Center for International Forestry Research (CIFOR)

CIFOR advances human well-being, environmental conservation and equity by conducting research to help shape policies and practices that affect forests in developing countries. CIFOR is a member of the CGIAR Consortium. Our headquarters are in Bogor, Indonesia, with offices in Asia, Africa and Latin America.