The Role of Social Marketing by the IFPRI in Influencing Sustainable Agriculture Policies in Nigeria

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The urgent need to mitigate climate change has prompted international NGOs to utilise social marketing to influence sustainable agricultural policies in developing countries. In Nigeria, the International Food Policy Research Institute (IFPRI) enhances its stakeholders' knowledge about sustainable agriculture and influence their policymaking decisions through research publications, training and workshops, and conferences. However, the research institute struggles to measure the long-term impact of its efforts due to the lack of marketing communication guidelines. Drawing on a qualitative content analysis, this study investigates IFPRI's utilisation of social marketing and proposes a Social Marketing Planning Guide (SMPG) for the research institute to strengthen its programmes, effectively influence sustainable agriculture policies, and create metrics to measure its influence on policymaking. Ultimately, this study contributes to understanding the interconnectedness between climate change, policymaking, and social marketing, offering insights for industry experts and NGOs to enhance their social intervention strategies in addressing climate change.

Keywords: Social marketing, Strategy marketing, Social interventions, Nigeria, Policymaking, Sustainable Agriculture, IFPRI

INTRODUCTION

The world is at the precipice of rising temperatures, land degradation, and food insecurity. In 2018, the Intergovernmental Panel on Climate Change (IPCC) released a report with a stark warning that global warming could reach 1.5°C between 2030 and 2052. The risks this report associates with increasing climate changes include extreme weather and sea level rises with adverse effects on water availability, agriculture, and inherently, human health (IPCC 2018).

Three years before the IPCC's report, the United Nations General Assembly also launched the seventeen sustainable development goals (SDGs) as a transformational blueprint for all nations in the world to jointly achieve prosperity in 2030 while taking "urgent action on climate change" (United Nations 2015). Consequently, as Moreira da Cruz et al (2020) argue, the growing concerns about the adverse effects of climate change and the UN General Assembly's launch of the seventeen SDGs led to the concept of

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responsible nations and organisations dedicated to promoting sustainability practices to tackle climate change.

Very crucial to this promotion is the development of sustainable agriculture in developing nations. Listed and prioritised by the United Nations as the second out of seventeen SDGs (United Nations 2015), sustainable agriculture is producing food to meet current and future demands while improving the ecosystem, the farmer's quality of life, and society as a whole (FAO 2015). The rapidly growing population of people around the world, expected to reach up to 9.8 billion by 2050, is creating a malnutrition and food security concern (UN/DESA 2021) where increasing food production to feed everyone could worsen climate change and leave adverse effects on the environment. According to the FAO (2024), up to 757 million people faced hunger in 2023 – with one out of every five in Africa – while approximately 900 million people experienced severe food insecurity.

In African countries such as Nigeria, the International Food Policy Research Institute (IFPRI), a non-governmental and not-for-profit organisation, has maintained a strong country presence, responding to research demands that could contribute to food security policies (IFPRI 2023). Nigeria suffers from acute poverty with 1 in 3 children affected, while it also faces a high rate of unemployment among the youth with over 42% of youths unemployed (UNICEF, 2024). Also, the country faces life-threatening malnutrition, especially among 50% of children, as well as food insecurity, all of which could be worsened by more adverse effects from climate change (FAO, 2020). As a form of intervention, IFPRI has over time initiated several policy-oriented projects in the country, focused on conducting research and advancing knowledge on strategic policy options that could support sustainable agricultural growth.

Despite how it may seem, the promotion of sustainable agriculture and other sustainable practices to mitigate climate change is not new to the research scene (Garcia et al. 2023; Abbass et al. 2022; Mbow et al. 2014; Shove & Spurling 2013). However, little progress has been made in analysing and understanding the social intervention methods that aid or influence the widespread adoption of these sustainable practices. For instance, previous studies on climate change interventions have focused on sustainable practices such as recycling, energy reductions in households and business estates, green marketing and the purchase of green products, and reducing fossil fuels during transportation (Garcia et al. 2023; Maibach et al. 2008). Whereas, social marketing, the important tool used by nations and international NGOs like IFPRI to ensure the widespread adoption of these practices, has remarkably little research literature, especially in the context of climate change.

Arguably, social marketing is society-based. It is oriented towards achieving the well-being of a society and is dependent on the current and future needs of the society (Bhat et al. 2019). Yet, despite the growing concerns over climate change and several developmental campaigns carried out by international non-governmental organisations to mitigate it, there has been significantly little research literature attempting to establish the interconnectedness between climate-change intervention and social marketing, while reinforcing how social marketing could be used to influence the formulation of sustainable policies. As Hall (2018) argues, the contributions of marketing communications generally to mitigate climate change have a "stranded research" status, receiving very little attention. This is the same with its role in influencing policies around sustainable practices in developing countries.

Through this study, academic insights are gained into the effectiveness of social marketing in influencing policies around sustainable agricultural policies in Nigeria. Findings from the analysis of the use of social marketing by the International Food Policy

Research Institute provide researchers with an understanding of the interconnectedness between climate change, policymaking, and social marketing. More so, this study will contribute to the existing literature on the conceptualisation and effectiveness of social marketing in positively changing human behaviour for the benefit of society.

LITERATURE REVIEW

Social Marketing as a Social Intervention: A Conceptual Review

The term "social marketing" was propounded by Kotler and Zaltman (1971) as a marketing tool for facilitating change in individuals through the planning and implementation of strategic programs. Kotler and Lee (2008), nearly four decades later, argue that social marketing embodies an approach of applying marketing concepts and methods to produce, convey, and offer value that facilitates changes in certain individuals' behaviours that would benefit society in terms of the environment, individual healthcare, and local communities. In this vein, the goal of social marketing is to identify a habit or activity that the target population can quantify or comprehend as having been completed (UNICEF, 2024).

Examples of the effectiveness of utilising social marketing were argued by Stead et al. (2007), who analysed 54 social marketing interventions and discovered evidence that indicates that interventions or strategic programs that adopted social marketing principles were effective across a range of changed behaviours, including environmental and policy changes related to physical activities, illicit drugs, and alcohol. The "London on Tap" campaign launched by the Mayor of London and Thames Water in 2007 is a typical example of social intervention programs that effectively influenced changed behaviour, particularly for the benefit of the environment and society (Sahakian & Wilhite 2013). The campaign focused on reducing the purchase and consumption of bottled water by engaging people in London to understand and question how the consumption of bottled water was harming the environment. When the campaign ended a year later, the consumption of bottled water had dropped by eight per cent while several people began to order tap water even in fancy restaurants (Sahakian & Wilhite 2013).

Figure 1: Two-set Venn Diagram Showing the Principles of Social Marketing (Dann 2010)
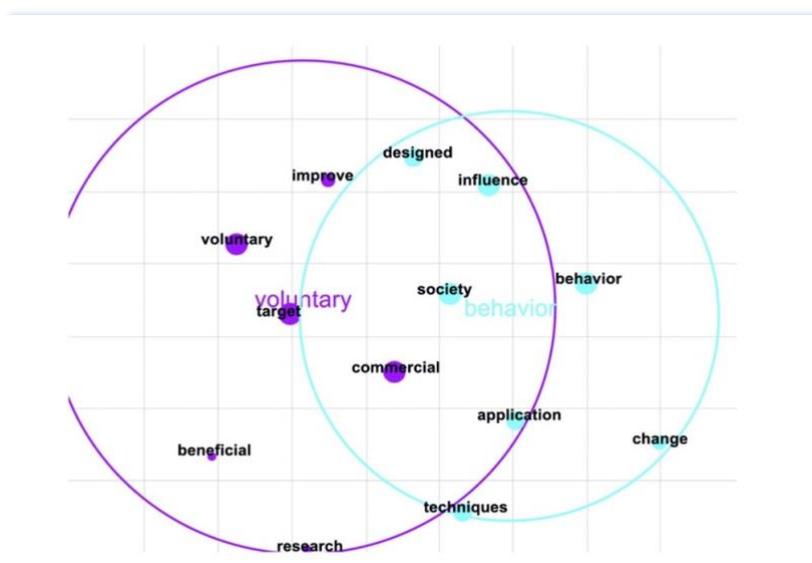
Furthermore, according to Dann (2010), social marketing has four core principles: marketing, behaviour, voluntary, and benefits. The marketing principle depicts the adoption of commercial marketing processes such as content marketing or social media campaigns to induce temporary or permanent behavioural changes in a targeted group of people. Behaviour, as a social marketing principle, describes changes in behaviour that occur due to communications regarding the benefits of adopting the new behaviour. The voluntary aspect involves introducing a competitive social marketing offering to ignite a voluntary change in behaviour from the targeted group. Benefits, the fourth core principle of social marketing, demonstrates how the return on social investments exceeds the financial or non-financial costs of social marketing campaigns. It pinpoints the social benefit expected as returns when the targeted group of people adopt the promoted new behaviour (Dann 2010).

Lee and Kotler (2011) also introduced extensive planning processes that social marketing entails. These processes include developing a specific social or intervention goal, conducting a situational analysis to understand why the intervention is required or important, researching and defining the target audience, highlighting the behavioural change objectives in the target audience, using marketing techniques to reach the target audience and facilitate the expected behaviour, and monitoring and evaluating the impact of the entire social marketing process (Lee and Kotler 2011). Reinforcing this planning process, Akbar et al. (2021) presented the CSD-IES planning framework of social marketing, defining the step-by-step approaches to influencing or changing people's behaviour through social marketing programs. The CSD-IES is an acronym that combines the principles of social marketing, namely "consumer research, segmentation, design of the social program, implementation, evaluation, and sustainability" (figure 2) (Akbar et al. 2021).

Figure 2: The CSD-IES Social Marketing Planning framework (Akbar et al. 2021)
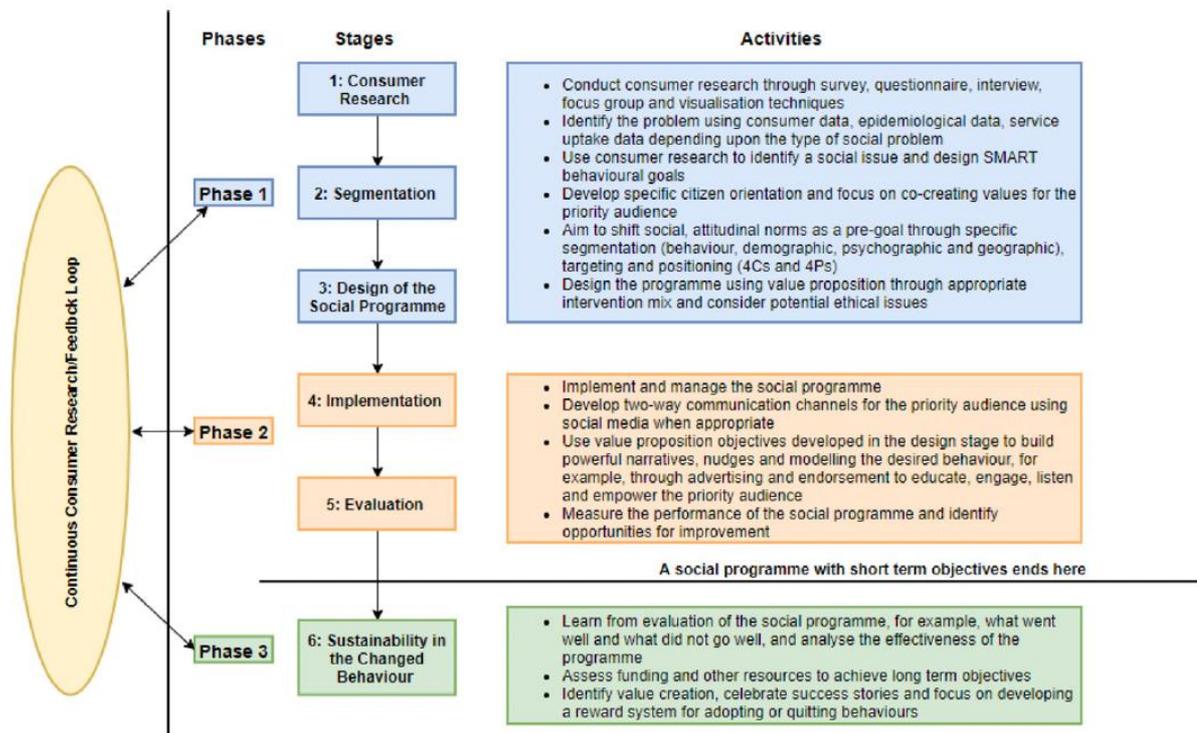
Invariably, social marketing entails a campaign that uses marketing techniques, including the collection, gathering, and provision of data regarding various fields such as healthcare and the environment, to facilitate prosocial behaviour - that is, sharing, volunteering, researching, and cooperating with the intent of benefiting the larger society (Thaler and Helmig 2013). Social marketing, in this vein, adopts information-intensive environmental campaigns geared towards transforming useful information into actions (Rodriguez-Sanchez 2023).

Influencing Policymaking and Sustainable Practices Through Social Marketing

Policies are declarations made by the government to intensify, prohibit, or add regulations, decisions, and resolutions into law (Birkland 2001). To several researchers (Lee 2015; McKenzie-Mohr 2011) policymaking and social marketing seek to achieve the same objective—necessitate change in people's behaviour based on the need to implement solutions to current problems in society. Establishing the influence social marketing has on policymaking, Lee (2015) argues that social marketing's community-based need to facilitate sustainable behaviour often leads to the identification of problems and their solutions, the establishment of effective strategies including policymaking, series of tests or experiments, and the implementation of solutions in broad-scale – also influenced through policies.

Arguably, social marketing creates an avenue in which the laws, decisions, and procedures implemented through policymaking could be achieved by informing and educating people on the need to change their practices or adopt new beneficial policies in the first place. This tallies with FAO's (2015) argument that the influence of social marketing on policymaking could be seen through its prioritizing consumer orientation,

trade orientation, and producer orientation, thereby rendering the mode of information and education significant in reaching the targeted community or audience.

A critical example is the public policy implemented in Brazil by the United Nations Framework Convention on Climate Change (UNFCCC), termed the National Climate Change Adaptation Plan (NAP). This plan required the participation of communities and districts, with a widespread articulated plan of action regarding the execution of the climate change agenda (Nicolletti et al., 2019). The actions included developing an official online platform that provides an unrestricted view of the available measures and programs for decreasing the effect of climate change in Brazil (UNFCCC 2021). Another key action plan placed in the NAP was encouraging and assisting in the development of research based on themes of climate change which included the development, adaptation, impact, and vulnerabilities of technologies for climate change adaptation. The NAP concluded these actions by making publications [published in the form of progress reports] available to the local communities in Brazil (UNFCCC 2021).

Similarly, the International Food Policy Research Institute (IFPRI) with assistance from the United States Agency for International Development (USAID) instituted the Gender, Climate Change and Nutrition Integration Initiative (GCAN) in Nigeria which primarily used publications [journal articles, briefs, and blog posts] to design, monetise, and strengthen the government as well as local and international partners on enhancing climate change policies with gender equality and nutrition (IFPRI 2024). The use of this social marketing technique [publications] is essential in Nigeria which struggles with food security, gender inequality, and climate change (Obayelu et al. 2014).

There is arguably an intersection between climate change, social marketing, and policymaking. Due to the urgency of climate change effects, social marketing has over time been utilised by several organisations as a behavioural intervention to induce environmentally friendly behaviours (Hall 2018), such as sustainable agriculture practices. According to Velten et al. (2015), sustainable agriculture involves the management and integration that prioritises producing high-quality food and securing natural resources by ensuring eco-friendly and profitable procedures, rather than depending on commercial products such as fertilisers. This includes, for example, engaging in the integration of ecological pest management, which involves embarking on traditional and natural pest controls such as legume-based crop rotation to increase soil nitrate as well as the implementation of cover crops like green manure to decrease pest attacks and weed infestations (Pretty & Bharucha 2015).

Apart from the integration of ecological pest management, Yirga (2019) reveals that agroforestry is a procedure for achieving sustainable agriculture. This involves the purposeful growing of trees and crops, thereby curtailing the effect of biodiversity, water pollution, and soil erosion spurred by the advent of climate change (Yirga 2019). The implication of these forms of sustainable agriculture involves prioritising the use of traditional and natural practices and procedures in farming rather than the use of chemical and industrialised materials such as fertilisers that cause an increase in CO_2 and CH_4 [carbon dioxide and methane] which are hazardous to the environment (Shabaan et al. 2022). Inherently, facilitating sustainable farming practices significantly impacts climate adaptation solutions by protecting global food production, safeguarding water storage systems, and soil sanitisation (Rosa 2022).

To ensure the widespread adoption of sustainable agriculture, developing countries utilise the implementation of sustainable agriculture policies to influence the behaviour of farmers, scientists, food processors and traders – everyone involved in their agricultural value chains (Pernechele et al. 2018). Ducker (2024) argues that the development of sustainable agriculture policies stems from SDG2 [the second goal of the

Sustainable Development Goals (SDGs)], which calls for a global need to safeguard food security and protect the environment by promoting sustainable agriculture practices.

Nigeria is one of the developing countries in the world that has heeded this call. To mitigate the negative consequences of climate change, the Nigerian government established the National Climate Change Policy for Nigeria 2021-2030, which promotes the adoption of sustainable agriculture practices such as agroforestry, afforestation, the enhancement of irrigation, and the conservation of soil moisture through effective tillage methods (Department of Climate Change Federal Ministry of Environment 2021). Also, according to Malley et al. (2021), Nigeria's Federal Executive Council, as of June 2019, instituted the Nigerian National Action Plan to trigger a decrease in Short-Lived Climate Pollutants [SLCPs], which entails the prohibition of products and materials in agriculture that produce harmful chemicals to the environment such as methane, carbon dioxide, and hydrofluorocarbons.

METHODOLOGY

To investigate how international NGOs, particularly the International Food Policy Research Institute (IFPRI), utilise social marketing to influence sustainable agriculture policies in Nigeria, this study draws on qualitative content analysis of secondary sources of evidence, including peer-reviewed journals, independently conducted impact assessments and case study analysis of IFPRI's policy-based programs in Nigeria, and data found through IFPRI's research repository. The secondary sources of evidence analysed, particularly the impact assessments and case study analysis, are pieces of literature that contain findings from interviews with past and present leaders and employees of IFPRI, surveys of conferees and participants of IFPRI programs, and analyses of the impact of IFPRI's global and in-country programs on national policymaking actions.

An extensive review of the secondary sources of data is conducted to examine the influence social marketing activities from selected programs carried out by IFPRI have on the adoption of sustainable agriculture policies in Nigeria. The peer-reviewed journals, independent impact assessments, and case study analysis were sourced from IFPRI's publication repository and major databases such as Science Direct, Google Scholar and Web of Science. Consequently, following a thorough review of the literature, three main categories with variables of sub-categories were built in a coding frame (see Appendix 1).

The first category in the coding frame focuses on examining policy-based research programs conducted by IFPRI in Nigeria to determine the evolution of the research institute's social intervention and policy influence activities in the country. The second category analyses existing communications from the IFPRI programs in Nigeria and the stakeholders targeted, identifying the social marketing tools utilised to achieve climate intervention and policy influence goals. Eventually, the third category evaluates the role the utilisation of social marketing plays in helping IFPRI shape or influence specific sustainable agriculture policies in Nigeria. Invariably, each category allows an evaluation of IFPRI's current social marketing activities in Nigeria, presenting the programs conducted, the tools utilised, and an assessment of policymaking impacts made, regarding sustainable agriculture.

FINDINGS AND DISCUSSIONS

IFPRI Policy-based Programs in Nigeria

The first twenty-five years of IFPRI's existence witnessed the research institute focusing on analysing global food situations, especially since it was established during the world food crisis in the 1970s with a mission to improve food security through policy research. According to a report by von Braun and Pandya-Lorch (2005) which compiled highlights of IFPRI's research from 1975 to 2005, earlier policy-based research by IFPRI, because of its founding mission, concentrated on international strategies for improving food security and the role agriculture could play in global economic development. At the dawn of the 21st century, however, food productivity globally had improved due to the intensification of farming activities and mechanisation, but this came with climate change effects (FAO 2022). Social and environmental goals such as poverty reduction and improved nutrition and environmental health, especially in developing countries, began to gain more attention and the IFPRI started a decentralisation strategy where its staff could engage directly with individual countries and influence policy creation and implementation through research and communication.

By 2002, IFPRI had formally created the CPs (country programs) – what Hazell et al. (2018) describe in their impact assessment of IFPRI's program activities as "a program of work led by one or more outposts IFPRI senior staff that makes a sustained and coherent effort to inform and influence a range of agriculture, food, and poverty-related policies or strategies in a country." In developing countries in Sub-Saharan Africa such as Nigeria, IFPRI structured the CPs into CSSPs (Country Strategy Support Programs), focusing on country experiences and local policymakers' demands for research input in policymaking (Hazell and Slade 2015). The focus was primarily on influencing policies that encourage improved and sustainable agriculture practices which will, in turn, enhance and restore the country's food systems and environment.

A review of the CSSP in Nigeria brochure on IFPRI's website indicates that one program – the Nigeria Strategy Support Program (NSSP) – is currently being run by the research institute in the country, alongside fifteen development projects such as the Food Security Simulator (FSS) and the Gender, Climate Change and Nutrition Integration Initiative (GCAN). Interviewing past and present IFPRI leaders to obtain evidence of IFPRI's program experiences, Hazell et al. (2018) assert that the NSSP was launched in 2007 with a series of objectives to address new critical issues in Nigeria's agricultural sector. As of the early 2000s, Nigeria faced the lingering threats of hunger, malnutrition, and economic instability due to a fast-growing population (Swanson 2007). The agriculture sector at the time was also expected to be affected by climate change and the under-empowerment of smallholder farmers (Enete and Amusa 2010). By the time the NSSP was created, the prices of food globally had increased exponentially, cascading into social riots and economic instability in both developed and developing countries (McMichael 2009). Nigeria particularly experienced spiralling food prices, especially in staple crops such as rice, cassava, soybean, maize, and millet (Olomola 2014) amidst concerns regarding climate change, desertification, and poverty challenges.

IFPRI therefore created the NSSP to build a strong, integrated knowledge and information support system (SAKSS) to address these critical issues in the country. The SAKSS was to assist in filling key knowledge gaps in rural and agricultural development through policy research, enhance the nation's capacity for policy analysis, and facilitate policy dialogues between the government, research communities, donors, and civil societies (Hazell et al. 2018). From 2007 to the time of conducting this analysis, the NSSP

worked with and received funding from several national and international partners, including the Federal Ministry of Agriculture, the Central Bank of Nigeria, the European Union, and the United States Agency for International Development, to conduct extensive research that investigated policy-based issues that could sustainably transform Nigeria's agricultural sector (Hazell et al. 2018). Between 2010 and 2014, for instance, the NSSP carried out research exploring policy challenges and opportunities to expand Nigeria's rice economy (Gyimah-Brempong et al. 2016). Other key activities between 2007 and 2024 also include capacity-building programs such as yearly training workshops and the publication of several working paper series to advance the knowledge of farmers, agribusinesses, policymakers and government and non-government analysts.

Social Marketing Tools Utilised by IFPRI's Policy-based Programs

According to an assessment of the impact of IFPRI's decentralisation strategy in developing African countries like Nigeria (Benin et al. 2018), IFPRI conducts program activities that make research findings available to stakeholders to enhance their knowledge and inherently influence their policymaking choices. These stakeholders are IFPRI's primary audiences, including policy leaders, researchers and educators, farmers and agribusinesses, government and non-government analysts, and civil society organisations with policymaking and policy adoption decisions that can affect the daily activities of people affected by poverty, malnourishment, and climate change effects (Paarlberg 2012; Hazell and Slade 2015; IFPRI 2016; Benin et al. 2018; Hazell et al. 2018).

Figure 3: A Table Indicating IFPRI's Stakeholders (Target Audience), Program Goals, and Marketing Communication Channels (IFPRI 2016)

		National policy makers	Multilateral and bilateral agencies	Academics	Civil society and the general public	Private sector
Products	Strengthen traditional products	Flagships, briefs, books, policy seminars, high-level dialogues, global conferences, newsletters				
	Develop new products	Blogs, videos and documentaries, information graphics, presentations, websites, interactive data and web applications, accessible repositories				
Tools	Build relationships	Build local knowledge Open direct line of communications Share country-specific data/ resources Improve technical knowledge among policy makers	Form strategic partnerships	Continue high-quality research communications Establish more links with in-country libraries (universities, ministries, etc.)	Stay connected via social media channels, meetings, conferences Find people who can help share research findings and collaborate	Form strategic partnerships
	Engage media	Analyze media outlets Increase media citations of IFPRI's research and interviews with researchers Build capacity of developing country journalists				
	Train researchers	Presentations and media interview skills Research communications skills, including academic and general social media tools				
	Support country offices	Systematic training and technical support in the areas of data management, visual content management, web development, media relations, presentations and editing, and events organization Mentoring				

Hazell and Slade (2015), in their assessment of the impact of IFPRI's country, regional, and international programs, highlight three ranges of marketing communications channels utilised by IFPRI to engage these stakeholders, namely publications, communications and outreach, and capacity-building.

Publications
Publications, arguably, are the primary output of IFPRI's policy-based research. The IFPRI, in its 2016 communications strategy document stipulates that it uses a "well-known set of tools to reach its global audiences, including reports, books, briefs, discussion papers, newsletters, and datasets" (IFPRI 2016). More so, according to Hazell and Slade's (2015) impact assessment, a total of 1,515 policy-based papers were published by IFPRI in journals tracked by the Institute for Scientific Information between 1975 and 2015. As more country-specific policy influence became essential over the years, IFPRI intensified its paper publication to reach more of its stakeholders. In 2022, IFPRI published 370 peer-review papers and 55 datasets, receiving 163,332 publication downloads, 224,332 dataset downloads, 1,117,835 views on Google Books and 18,279 citations on Web of Science (IFPRI 2022).

In Nigeria, a total of 221 policy-based publications, tracked on the research institute's database, have been published by the IFPRI through the NSSP. One of these publications includes a policy brief (Fan et al. 2008) that offers evidence-based policymaking processes as the solution to promoting environmentally sustainable agriculture in Nigeria. Another publication, a book (Gyimah-Brempong et al. 2016), extensively discusses the policy challenges affecting the transformation of the Nigerian rice economy and the policy solutions to improve the sector through sustainable agriculture. A more recent paper (Amare et al. 2023) highlights climate change effects impacting agricultural productivity in Nigeria and policy-based interventions that can be used to promote climate-resilient agriculture.

Figure 4: A Table Indicating the Number of IFPRI Publications and Citations by Year in ISI-tracked Journals (Hazell and Slade 2015)

Year	Number of IFPRI articles published in ISI-tracked journals	Cumulative number of IFPRI articles in ISI-tracked journals	Number of IFPRI citations in ISI-tracked journals	Cumulative number of IFPRI citations in ISI-tracked journals
1980	2	2	0	0
1981	3	5	1	1
1982	4	9	5	6
1983	4	13	5	11
1984	8	21	7	18
1985	10	31	17	35
1986	11	42	9	44
1987	9	51	25	69
1988	29	80	29	94
1989	7	87	34	128
1990	8	95	62	190
1991	16	111	53	243
1992	16	137	52	295
1993	15	152	82	377
1994	37	189	79	456
1995	25	214	93	549
1996	20	234	130	679
1997	28	262	149	828
1998	35	297	189	1,017
1999	39	336	261	1,278
2000	35	371	261	1,539
2001	36	407	324	1,863
2002	37	444	327	2,190
2003	51	495	379	2,569
2004	47	542	459	3,028
2005	54	596	522	3,550
2006	49	645	664	4,214
2007	73	718	1,025	5,239
2008	77	795	1,180	6,419
2009	76	871	1,593	8,012
2010	81	952	1,830	9,842
2011	126	1,078	2,212	12,054
2012	132	1,210	2,526	14,580
2013	142	1,352	3,116	17,696
2014	163	1,515	3,553	21,249

Arguably, IFPRI is reaching thousands of its targeted audiences through a high number of yearly publications, enhancing their knowledge through policy-based research. Although the statistics of views and downloads from publications are not standard measures of IFPRI's impact on policy changes (Hazell and Slade 2015), rigorous research publications from IFPRI to enhance its stakeholders' knowledge indicate the research institute's social marketing approach.

Paarlberg (1999; 2012) maintains in his impact assessments of IFPRI's 2020 Vision for Food, Agriculture, and the Environment Initiative that IFPRI's program publications are targeted at IFPRI's stakeholders to catalyse new sustainable agriculture policy actions that can solve food security, rural poverty, and environmental concerns. Evidence from interviewing IFPRI's country and regional staff also points to research publications as a tool utilised by IFPRI to achieve sustainable agriculture policy actions (Hazell et al. 2018). Invariably, IFPRI's approach to informing its stakeholders about sustainable agriculture practices entails the provision of information regarding strategic policymaking that can ensure the adoption of such practices. This approach reflects Thaler and Helmig's (2013) illustration of using marketing communication techniques, involving the collection, gathering, and provision of data, as a social marketing tool to facilitate prosocial behaviour.

Figure 5: The Policy Impact Pathway Created by IFPRI's Program Activities (Hazell et al. 2018)
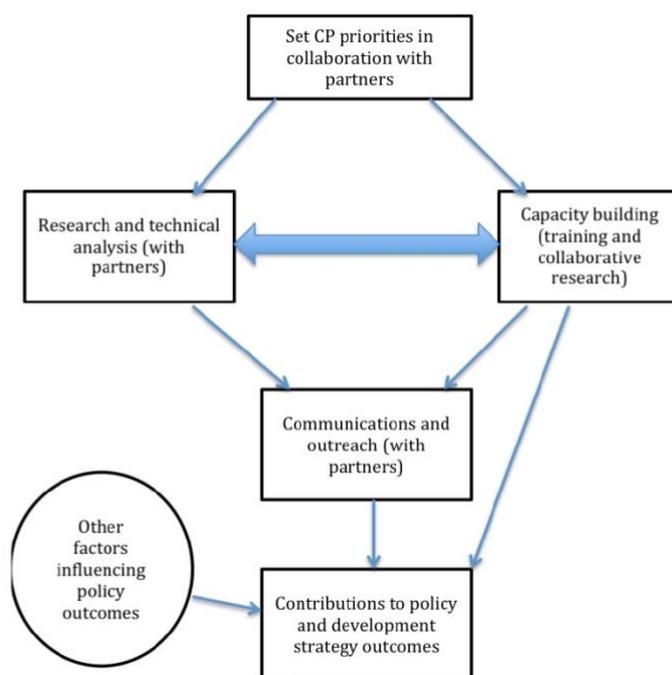
Also, IFPRI demonstrates Kotler and Lee's (2008) social marketing approach by utilising rigorous publications to convey and offer policy-based solutions that can be adopted and promoted to facilitate sustainable changes in farming and agriculture. Through its publications, IFPRI is creating social learning pathways – what Hazell et al. (2018) instead consider as impact pathways – to advance the knowledge of its stakeholders and influence the sustainable agriculture policies they adopt to solve malnutrition, food security, poverty, and environmental issues.

Communications and Outreach

In place of publications, IFPRI utilises communications and outreach to influence policymaking decisions. Both include workshops, seminars, newsletters, and one-on-one interactions with stakeholders through regional meetings. One of the most popular communication and outreach tools utilised by IFPRI to influence developing-country policymaking decisions is an extensive series of workshops, conferences, regional meetings, policy briefs and topical newsletter publications from 1993 to 2020 (Paarlberg 1999; Paarlberg 2012). These activities were part of the 2020 Vision for Food, Agriculture, and the Environment Initiative, launched in 1993 to promote the vision of eradicating hunger, malnutrition, and environmental issues by 2020 and generate information "to influence action by national governments, nongovernmental organizations (NGOs), the private sector, and international development institutions to realize the 2020 Vision" (IFPRI 1995).

According to Paarlberg's (1999) initial assessment of the impact of the initiative, a total of 35 meetings stimulating debates around food security topics were organised by IFPRI in the first two years of the 2020 Vision for Food, Agriculture, and the Environment Initiative. This was followed by a signature international conference in 1995 with 30 policy-based presentations and 500 people in attendance from different parts of the world. From 1993 to 1997, which witnessed the first phase of the initiative and the launch of its first international conference, 6 books, 22 discussion papers, 31 short policy briefs

and reports, and regular newsletters were also published through the initiative (Paarlberg 1999), engaging multiple stakeholders including policymakers, researchers, and agribusinesses.

By 2014, IFPRI had organised six international conferences through the 2020 Vision for Food, Agriculture, and the Environment Initiative, making it a periodic stakeholder outreach for dialogue, engagement and information sharing with an average of 500 to 700 participants (Paarlberg 2014). While the first international conference in 1995 was held in Washington D.C., subsequent conferences had themes that focused more on developing countries where IFPRI had begun country-specific programs (Paarlberg 1999). Consequently, IFPRI hosted the international conference in Uganda in 2004, India in 2011, and Ethiopia in 2014, focusing on debating policy-based topics ranging from food and nutrition security to resilience against environmental issues and climate change (Paarlberg 2012; 2014).

Besides the international 2020 Vision conferences which have had stakeholders from Nigeria and other developing countries as conferees, Hazell and Slade (2015) report in their assessment of IFPRI's research programs that IFPRI organised country workshops and seminars in Nigeria, interacting with research communities and decision-makers in the country to influence new policy actions. Several of these workshops and seminars were organised through NSSP and other policy-based research projects run in Nigeria, leading up to a series of publications of workshop reports and discussion papers to reach more stakeholders. These country workshops and seminars include the NSSP's Validation Workshop on Agriculture Development Domains in Nigeria (Adeogun 2009) which provided IFPRI with an avenue to solicit information and share preliminary findings on policy-based solutions to improve Nigeria's agricultural productivity. A more recent workshop on Women's Empowerment in Agrifood Systems Governance (Kyle et al. 2023) also familiarises IFPRI's stakeholders in Nigeria with inclusive governance and policies that can promote climate change adaptations by women in the agrifood system.

In the same vein as utilising publications, IFPRI uses a series of communications and outreach initiatives to enhance the policy-based knowledge of its stakeholders. Paarlberg (1999) argues after a survey of several participants of IFPRI's communications and outreach, particularly the 2020 Vision conference in 1995, that IFPRI's stakeholders significantly improved in policy-based knowledge because of the conference. Participants also come in contact with shared information and views regarding sustainable agriculture practices already being adopted through policy-based research, getting introduced to sustainable agriculture policy choices they could also adopt (Paarlberg 2014). Inherently, communication and outreach organised by the IFPRI in Nigeria or other developing countries help the IFPRI to strengthen the knowledge of sustainable agriculture and food policies among its stakeholders.

McKensie-Mohr (2011) discloses that a social marketing goal can be seen from it driving the social challenge of climate change. By utilising workshops and conferences to bring stakeholders together to debate sustainable practices that can be adopted to mitigate the country's food security and environmental issues, IFPRI integrates yet another social marketing principle into its marketing communications. Dann's (2010) four core principles of social marketing – that is, marketing, behaviour, voluntary, and benefits – are also evident in IFPRI's communications and outreach, despite how there aren't specific guidelines by IFPRI on the best practices and strategies to carry out these principles through workshops and seminars.

Take "marketing," "benefits" and "voluntary" for instance. IFPRI organises country workshops, conferences, and meetings to open conversations and communicate research evidence that addresses the benefits and obstacles to new sustainable agriculture policies,

a marketing technique that IFPRI program leaders believed to help make policymakers receptive to IFPRI's policy recommendations (Hazell et al. 2018). The workshops in developing countries like Nigeria are arguably IFPRI's adoption of commercial marketing processes to induce enlightenment from its stakeholders regarding sustainable agriculture practices, which would subsequently lead to a voluntary behavioural shift - the adoption of the same policies by the policymakers. Allowing participants already adopting the new policies to present the incurred benefits to other participants significantly contributes to this behavioural shift.

Capacity Building

Capacity building initiatives are another social marketing tool discovered to be utilised by IFPRI to influence policymaking decisions. According to Hazell and Slade's (2015) assessment, IFPRI uses capacity building "to strengthen the capacity of developing countries to undertake, communicate, and use their evidence-based policy research." These capacity-building activities include offering formal courses, hands-on training of partner organisations' staff, and thesis supervision in universities to strengthen country-specific knowledge and help stakeholders develop the skills that are required to shape sustainable agriculture policies that would help to mitigate food security, nutrition, and environmental issues (Hazell and Slade 2015).

IFPRI's capacity building in Nigeria is often implemented through the NSSP to enhance the development of policy-oriented research in the country (Hazell and Slade 2015). In 2014, two multiday workshops on Stata and CSPro were organised by the NSSP for the employees of the National Agricultural and Extension Liaison Services. Two years earlier, the IFPRI supervised two master's research while conducting several training workshops every year (Hazell et al. 2018) to create a pipeline of researchers skilled in policy-based research that could solve poverty, nutrition, and environmental issues.

Reviewing the marketing communication channels IFPRI uses to influence policymaking decisions, Hazell et al. (2018) pinpoint collaborative research as one of the most effective ways IFPRI contributes to capacity strengthening, helping countries build statistical systems and databases they can utilise in developing sustainable agriculture policies. This collaborative research can entail partnering with and training government institutions to undertake policy-based field surveys, data analysis or economic modelling (Hazell and Slade 2015). To initiate this collaborative research, capacity needs assessment studies are carried out by IFPRI and presented through the NSSP as an approach for Nigerian policymakers to sustainably improve agriculture and food system policies.

An example is the capacity needs assessment presented as an NSSP working paper (Babu et al. 2014) that documents capacity-strengthening approaches for the Federal Ministry of Agriculture and Rural Development (FMARD) to implement the Agricultural Transformation Agenda (ATA). An NSSP brief (Akinyele 2010) highlights the current gaps in knowledge with respect to ensuring food and nutrition security in Nigeria and the capacity strengthening needed to fill that gap. Also, a discussion paper (Ojo et al. 2019) recommends strengthening farmers' farm management practices as the most efficient way of sustainably improving the country's rice productivity growth.

By focusing on empowering developing countries, IFPRI's capacity-building initiatives reflect social marketing goals, particularly how it aims to trigger a change in policymaking approaches by necessitating capacity strengthening or the acquisition of new policy-based knowledge and skills. As Kotler and Zaltman (1971) propound, social marketing is a marketing tool used for facilitating change in individuals through the planning and implementation of strategic programs. Through capacity-building initiatives like collaborative research and training, IFPRI equips partner organisations' staff with

new information and policy-oriented skills that could lead to policy-based research and recommendations that would benefit the country's agriculture and help the planet to solve food security and climate issues.

The Impact and Weakness of IFPRI's Utilisation of Social Marketing Tools to Influence the Adoption of Sustainable Agriculture Policies in Nigeria

IFPRI's utilisation of publications, communications and outreach and capacity building has had significant impact on the adoption of national policies to promote the adoption of sustainable agriculture in Nigeria over time. Conducting pre-conference and post-conference surveys, Paarlberg (1999; 2012; 2014) argues that the 2020 Vision conferences hosted by the IFPRI over the years have both short-term and long-term impacts on conferees from developing countries. Short-term impacts include the knowledge enhancement and capacity strengthening already intended by the conference activities. Whereas long-term impacts extend to countries adopting acquired knowledge from IFPRI's conferences to develop policies that could benefit their rural communities, economy, agricultural sector, and environment for generations to come.

An impact assessment of the NSSP (Hazell et al. 2018), drawing findings from interviewing IFPRI and partner organisations' leaders, also revealed that several policy-based research published through the NSSP were instrumental in the Nigerian government's adoption of the Agriculture Promotion Policy in 2016. The NSSP's collaborative research with FMARD to develop the Food Security and Nutrition Strategy (2016 – 2025) report in 2015 helped the ministry to develop its Food Security and Nutrition Strategy in 2017 (Place and Hazell 2018). According to IFPRI's annual reports, publications by IFPRI between 2020 and 2022 accumulated over 7.5 million views (IFPRI 2022; IFPRI 2021; IFPRI 2022). However, Hazell and Slade (2015) argue in their assessment of the impact of IFPRI's program activities that measures such as the number of publication views and downloads are not logical indicators of impact or strength of the organisations policy-based programs. Moreover, Nigeria has continued to face low technological intake in agriculture (FAO, 2024) despite the continuous publications by IFPRI. This suggests a gap exists between the IFPRI rate of publications and the outcomes realised in the agriculture sector of the country. It also questions whether IFPRI's social marketing efforts could have included a broader range of social marketing tools to achieve a stronger impact on stakeholders' behaviour and practices.

Take for instance, the Strengthening Nutrition in Priority Staples [SniPS] program organised in Nigeria by the Global Alliance for Improved Nutrition [GAIN]. The program, since 2021, encourages the production, marketing, and consumption of biofortified crops (GAIN, 2024) by engaging with stakeholders through interpersonal counselling, mass media campaigns, and community mobilisation while utilising pre-existing delivery mechanisms such as publications (GAIN, 2024). Similarly, the School Garden Project organised by FAO alongside the Federal Ministry of Agriculture and Rural Development (FMARD) and the Federal Capital Territory Authority (FCTA) utilised community engagements by students, their families, and school authorities to educate and encourage teachers and students to sustainably grow their own gardens and address the intergenerational cycles of malnutrition (FAO 2021).

Regardless of an outcome gap, evidence from external evaluations of marketing communications from IFPRI's programs and subsequent policy-oriented actions from IFPRI's stakeholders still points to the stakeholders, primarily policymakers' reliance on IFPRI's policy-oriented research in their policymaking decisions. One of the pieces of evidence cited to indicate IFPRI's influence on the adoption of sustainable agriculture in Nigeria is the series of events that followed the NSSP's evaluation of the impacts of the

Fadama-II agriculture and rural development projects in rural communities in Nigeria. The positive findings in this evaluation led to "Fadama-II winning the World Bank Africa Award for Excellence for Sustainable Development and prompted the government to initiate a follow-up project (Fadama-III) to expand it to more states in Nigeria" (Hazell et al. 2018). Recently, an NSSP working paper (Adesugba and Mavortas 2016) that evaluated the relationship between youth employment and agriculture in formulating development policies has influenced the vice president's view on youth employment and sustainable agriculture, making its way into the country's Agriculture Promotion Policy (Place and Hazell 2018).

Figure 6: A Generic Graph of the Social Learning Pathway IFPRI Creates to Influence the Adoption of New Policies
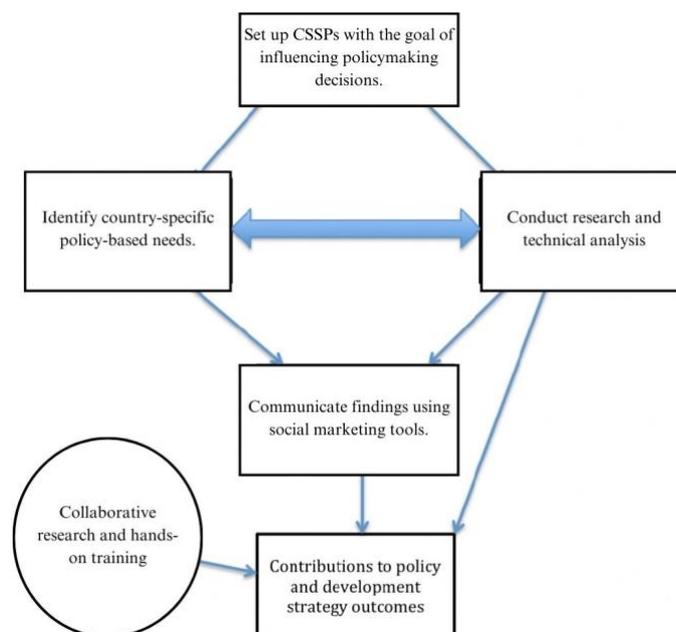
The social learning pathway that IFPRI creates through its utilisation of already established social marketing tools in this study is evident. The research institute attempts to influence sustainable agriculture policies and strategies in Nigeria by creating the NSSP which conducts policy-based research and communicates the findings through a range of marketing communications, including publications, debates and presentations during conferences. Capacity-building activities, such as collaborative research and hands-on training, are also used by the NSSP in addition to publications and outreaches to create pathways for a long-term influence where the Nigerian government could create its policy-based research to strengthen its sustainable agriculture policymaking capabilities (see Figure 6 above).

This social learning pathway has notably been used to ensure impact on the adoption of sustainable agriculture policies in several African countries apart from Nigeria – Egypt, Ethiopia, Ghana, Malawi, Uganda, and the Democratic Republic of the Congo (Place and Hazell 2018).

RECOMMENDATIONS

Through the analysis of the range of marketing communications utilised by IFPRI to engage and influence its stakeholders' policymaking decisions, this study has revealed the utilisation of social marketing tools in the research institute's program activities. However, there is no evidence to suggest that IFPRI has guidelines on the best practices for engaging its stakeholders through social marketing or any form of marketing communication. There is also no evidence indicating that the research institute is aware of its utilisation of social marketing to achieve its social intervention goals.

Moreover, the literature analysed suggests that IFPRI faces the challenge of measuring the impact of its policy-based program activities, especially with respect to sustainable agriculture. Hazell and Slade (2015) argue that IFPRI's insufficient attention to marketing communication practices has led to a research-to-policy gap, where it is nearly impossible to measure IFPRI's impact on policy changes and overall outcomes on stakeholders' behaviour and practices. The following social marketing planning guideline (SMPG), adapted from Dann's four core principles of social marketing and Akbar et al.'s CSD-IES social marketing planning framework, presents a framework for converting IFPRI's in-country program activities into policy influence and measuring such influence. The SMPG introduces a step-by-step social marketing strategy for the IFPRI to develop new programs (or strengthen existing ones) that effectively identify social problems such as poverty or climate change, deliver policy-based sustainable solutions through intervention programs such as the NSSP, and evaluate short-term and long-term impact for sustainable results. Besides influencing sustainable agriculture policies in Nigeria, IFPRI can choose to utilise the SMPG to meet a range of policy influence needs, including in other developing countries and across several sectors, industries, or economies.

Essential Social Marketing Principles IFPRI Would Utilise Through the SMPG
- Marketing: To ensure that IFPRI succeeds in its mission to influence sustainable agriculture policies, the research institute would work across a broad spectrum of marketing activities such as audience research (Hofsäss et al. 2022), audience segmentation (McDermott 2000), and content and social media marketing (Shawky et al. 2019). Utilising these marketing activities will help IFPRI to underline the social issue it needs to solve, the specific audiences it intends to

reach and influence, the kind of marketing activities required to engage these audiences, indicators of short-term and long-term success, and how to measure them (see figure 9).

Figure 7: A Generic Illustration of the SMPG for IFPRI

The CSD-IES social marketing planning framework (Akbar et al. 2023)
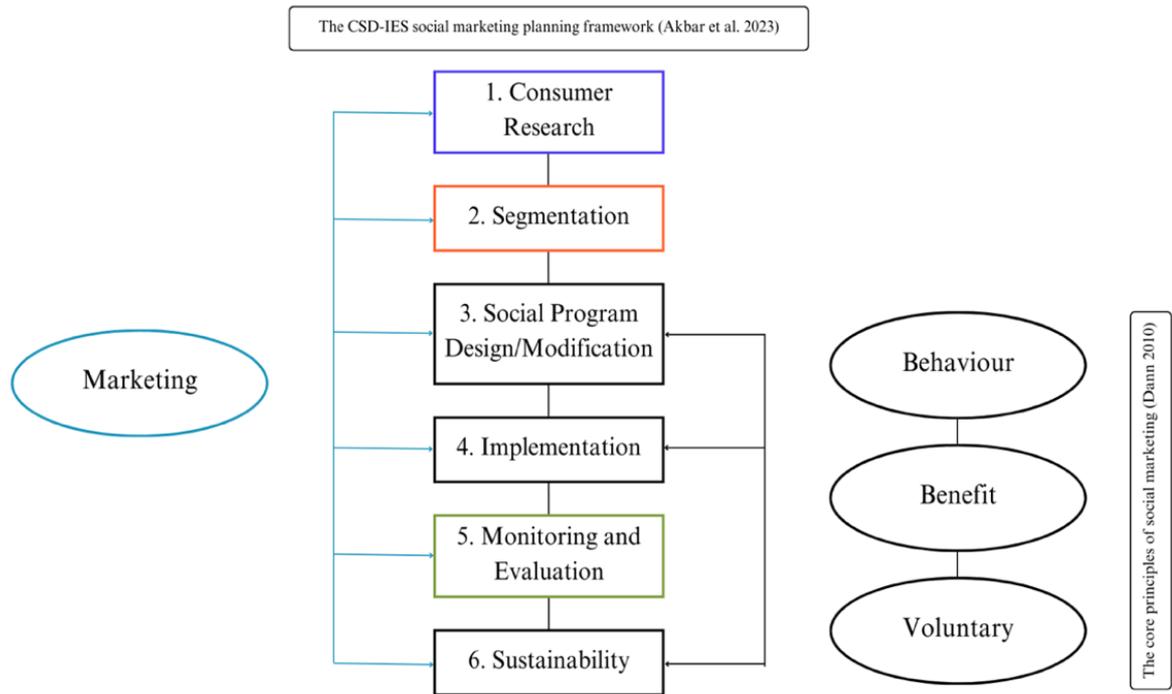
- **Behaviour:** Following analyses integrated via audience research, such as a situation analysis, IFPRI would further highlight the social issues it needs to change and prioritise influencing specific behaviour to achieve this change. In the context of its mission, this would involve influencing policymaking decisions by creating intervention programs for the benefit of the targeted audience and their environment.
- **Benefit:** IFPRI would be required to explicitly communicate the implications or environmental advantages as the benefits or value expected to be derived from the policymaking decisions it advocates. This would contribute largely to influencing the target audience to voluntarily adopt the policy changes the research institute recommends or promotes (Dann 2010).
- **Voluntary:** It would be essential that IFPRI focuses on value proposition (communicating benefits) to educate its targeted audience (Kotler and Lee 2008). By doing this, IFPRI can increase the possibilities of anticipated voluntary changes. The voluntary adoption of new policies can be maintained long-term by creating a two-way communication channel where targeted audiences benefiting from new policies can share feedback and their experiences with IFPRI alongside other IFPRI's target audience (Akbar et al. 2021).

The SMPG's Six Strategic Steps for IFPRI to Influence Sustainable Agriculture Policies and Measure Impact
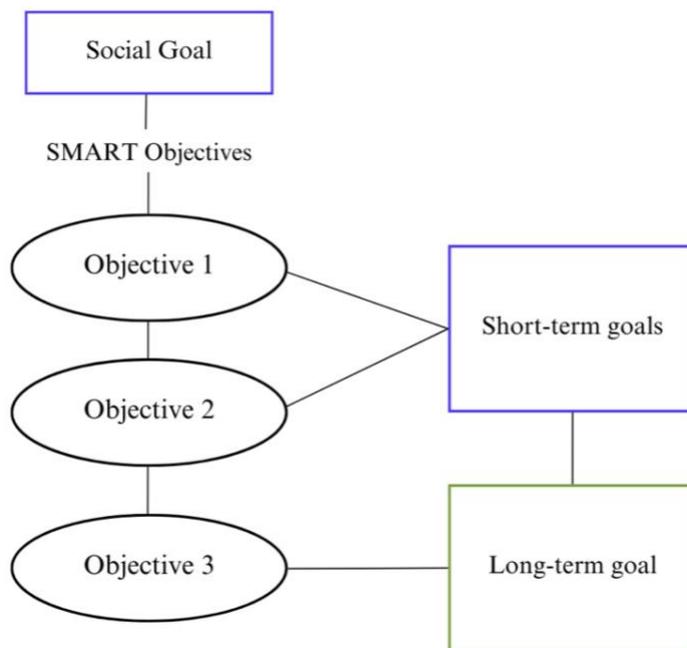
Step One: Audience Research

IFPRI should conduct audience research to understand who the priority audience is, their beliefs and challenges, and their daily farming practices, which may contribute to climate change effects, especially in the context of influencing the adoption of sustainable agriculture policies to mitigate climate change effects in Nigeria.

Tools that can be used to carry out audience research to obtain relevant information about the group of audiences to influence include surveys, questionnaires, focus groups, and interviews (Hofsäss et al. 2022). Using these tools to generate insights about the target audience will lead to the following social marketing approaches:

1. Identification of the priority audiences in a targeted country (e.g. farmers).
2. Identification of the social issues (e.g. low farming yield due to climate change effects) and the specific practices and habits from the priority audiences contributing to these issues (e.g. traditional agriculture).
3. The development of a social goal for social good (e.g. enhancing the priority audience's knowledge and induce changes to the practices or habits contributing to the social issue).
4. Identifying the value or benefits of achieving this social goal (e.g. restoring the environment).
5. Identifying and analysing the best channels or ways to engage the target audience in order to achieve the stipulated social goal (e.g. community engagement or social media).

An important activity during this first strategic step is redesigning the social goal into specific, measurable, achievable, realistic, and timely objectives (Akbar et al. 2021).

Figure 8: A Recommended SMART Objectives Structure for IFPRI

Step Two: Audience Segmentation

Audience segmentation involves a deeper analysis and understanding of the priority audience discovered through audience research. Audience segmentation would help IFPRI to identify the groups among this priority audience that share mutual features (Akbar et al. 2021), such as mindsets, behaviour, and demography, and have varying willingness to be influenced or convinced to change their current policies and practices for good. It is important and highly recommended that IFPRI segments its priority audience into primary and secondary audiences (Hult et al. 2011).

The primary audience is the segment of the priority audience whose influenced behaviour would lead to an instant adoption of sustainable agriculture policy changes. This includes policy leaders for example. The secondary audience is the other segment whose influenced behaviour doesn't instantly impact policy changes but would create a spectrum of more influence on the primary audience while also contributing to the long-term implementation of the policies adopted by the primary audience (for example, government analysts, researchers and agribusinesses).

Step Three: Social Program Design and Modification

The third strategic step of the SMPG draws largely from the first two (Akbar et al. 2021). Following the identification of a social issue, a social goal, SMART objectives, and audience segments, IFPRI can proceed to design a social intervention program (or modify existing ones) emphasising the four social marketing principles in the SMPG. The social intervention program, as a result, will be developed with well-thought-out messaging to reflect the target audience's needs or existing behaviour and practices. Appropriate positioning and communication tactics will also be chosen to influence new behaviours or practices in the target audience to solve their social needs (see Figure 9).

Additionally, emphasising behaviour, benefits and voluntary principles allows IFPRI to focus on developing program activities or processes that stimulate voluntary behavioural changes in the target audience by promoting the intended benefits of such changes (Dann 2010). This could include information sharing or stakeholder engagement

activities that stimulate social learning, which inherently leads to the adoption of new policies.

Step Four: Implementation

Implementation is one of the most important strategic steps in the SMPG. If conducted and managed appropriately, it increases the possibility of achieving anticipated social intervention goals (Akbar et al. 2021). The following activities are recommended for IFPRI to implement a social intervention program:

1. Educating and advancing the knowledge of its audience segments through research-based publications in peer-reviewed journals and blogs or other communication and outreach channels like conferences and capacity-building events (Lavis et al. 2003).
2. Utilising emerging technologies such as augmented reality (AR) and virtual reality (VR), popular social media platforms like Facebook, X, and Instagram, and content formats like videos and infographics (Rowley 2008) as additional tools for engaging or educating its audience segments.
3. Involving its audience segments as program partners by creating two-way communications channels where the target audience can enhance their knowledge and also offer insights that strengthen the social program to cater effectively to their needs (Akbar et al. 2021).
4. Engaging well-known media outlets for interviews and briefs (Stamp 2022) to simplify program activities and findings, increasing the possibilities of engaging its target audience.
5. Using storytelling across all media and publishing platforms to reveal the impact of its program activities, strengthens the target audience's willingness to be influenced (Weinreich 2021).

Step Five: Monitoring and Evaluation

Monitoring and evaluation follow implementation. This strategic step is crucial in monitoring and determining that the social program effectively reached the target audience and that the anticipated outcome (that is, behavioural change) was achieved after the target audience was engaged. It also evaluates if the achieved behavioural change solves the identified social issue (Akbar et al. 2021). During this strategic step, IFPRI must consider three aspects of its social marketing activities to monitor and evaluate: (1) the processes taken to engage and influence the priority or target audience, (2) the behavioural change achieved in the target audience through the social marketing processes, and (3) the outcome of the behavioural change with respect to solving specific social, economic, or environmental issues (Akbar et al. 2021).

Figure 9: A generic table illustrating a standard social marketing plan for an IFPRI program (e.g. the NSSP) using the SMPG.

Social Goal: Reduce poverty and end hunger and malnutrition through sustainable agriculture.		Target Audience					
		Primary Audience		Secondary Audience			
		Policy Leaders	Government Analysts	Researchers & Educators	Farmers and Agribusinesses	Civil Society Organisations	
Short-term success metrics: • Attendance • Feedback and reviews • Number of publications • Downloads • Social media engagement	**Objective 1:** Enhance the knowledge of 500 primary audience and 2,000 secondary audience concerning the benefits of sustainable agriculture practices by 2025.	Implementation					
		National and global conferences, seminars and workshops, newsletters, information graphics, interactive data, blogposts, and videos and documentaries.					
	Objective 2: Research and offer policy-based solutions to 100 primary audience concerning the promotion of sustainable agriculture for economic and environmental benefits.	Policy briefs, books and seminars, meetings and presentations, accessible repositories, case study papers, and collaborative research.					
Long-term success metrics: • Partnerships • New policies through collaborative research. • Awards and recognition • Feedback and reviews	**Objective 3:** Influence the successful adoption and continuous implementation of sustainable agriculture policies by a significant number of engaged primary and secondary audience.	Strategic partnership and two-way communication	Collaborative research.	Accessible repositories	Training and mentorship	Media outreach.	
Monitoring and Evaluation Tools:		Surveys, questionnaires, focus groups, social media analytics, media mentions and national awards/global recognition.					
Sustainability Tools:		Feedback loops, content repurposing, continuous audience research, and access to funding and other resources.					

For example, the processes taken to engage a target audience could involve a series of workshops conducted within six months. The instant behavioural change within that period could involve knowledge enhancement and continuous engagement with IFPRI's program, leading to collaborative research, consultation, and downloads of relevant publications from IFPRI's research repository over an extensive time. Eventually, the outcome of this new behaviour, monitored over two to three years (depending on the expected outcome of the designed social program) would be the adoption of sustainable agriculture policies relevant to the focus of the workshop.

The expected instant behavioural change could be outlined as short-term impact indicators, tracked over a short time. The long-term impact, including policymaking, could be broken down into key performance indicators or metrics (Manheim 2023) such as partnerships and collaborative research incurred, policy briefs submitted, government consultations achieved to develop country-specific strategies, and policies adopted by workshop attendees over a given period (see Figure 9 above).

Step Six: Sustainability

Long-term goals such as ensuring that the target audience utilises newly acquired knowledge to create and implement sustainable agriculture policies require sustainability strategies. The recommended sustainability strategies expounded from Akbar et al.'s (2021) CSD-IES social marketing planning framework include:

1. Evaluating social marketing activities or strategic steps that have yielded significant impact on behavioural changes and using insights from this success to determine the sustainability of the behaviour.
2. Ensuring the creation of two-way communications or feedback loop where target audiences or the priority audience are integral parts of the development of a social program and can share feedback of their experiences before and after a behavioural change.
3. Repurposing research or policy-based content in multiple formats and across relevant channels to ensure continuous knowledge enhancement as well as to continuously provide resources to maintain changed behaviours.
4. Carrying out continuous audience research to identify the target audience's varying needs and modifying the social program to suit these needs.
5. Sharing results and success stories with the target audience after conducting monitoring and evaluation in order to drive their continued interest and engagement with the social program.
6. Ensuring the availability of resources, including adequate funding and skilled social marketing teams, to achieve long-term objectives.

CONCLUSION

Sustainable agriculture has emerged over the years as an environmentally safe alternative to conventional agricultural practices that harm the environment and contribute to climate change (Muhie 2022). Prioritising policy-based actions taken to reduce or mitigate the effects of climate change, this paper has examined social marketing as an effective tool utilised by international NGOs, such as the International Food Policy Research Institute (IFPRI), to influence the adoption of sustainable agriculture policies in developing countries like Nigeria. Key points for industry experts, IFPRI and other international non-governmental organisations include:
1. There is an interconnectedness between climate change, social marketing, and the development of policies influencing the widespread adoption of sustainable agriculture practices.
2. Social marketing is arguably a climate-change intervention tool utilised by international non-governmental organisations to influence policymaking decisions involving sustainable agriculture in developing African countries like Nigeria.
3. A social marketing planning framework or strategy (such as the SMPG) can be used to effectively design and implement social or climate-change intervention programs and measure the achievement of intended outcomes.

Like any strategy developed from conceptual frameworks and principles, the SMPG has its limitations. The steps and approaches it presents may yield more results in some uses and contexts than others. Constant implementation and evaluation would be required to determine the efficiency of the SMPG in influencing policymaking decisions in areas and fields besides sustainable agriculture and other developing countries. Moreover, the CSD-IES social marketing planning framework that informed the

development of the SMPG is the first of its kind (Akbar et al. 2021). The SMPG may also have the same limitations that the CSD-IES social marketing planning framework has. This includes the requirements for improvement after implementation in diverse settings.

Further research by marketing consultants, given the key points of this paper, is encouraged to understand the role of social marketing in influencing global climate-change policies. Future studies could also focus on how social media could be an effective social marketing tool. For over a decade, digital tools such as social media have been used to engage with target audiences and influence their decisions (Kubacki et al. 2015) but there is no evidence in this study to suggest that social media is being used by international NGOs like IFPRI to influence policymaking decisions. The utilisation of social media and other digital media in social marketing could therefore be explored to argue the relevance of their use in influencing policy-based actions from targeted audiences.

Conflict of Interest Statement
No potential conflict of interest was reported by the author.

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