

## **The Role of International Research Institutes in accomplishing the UN Sustainable Development Goals with Special Reference to Women in Agriculture**

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### **Abstract**

*Sustainability has been defined as the use of human, natural and material resources in a way that satisfies current needs without jeopardizing the capacity of future generations. The United Nations Organization has set forth seventeen sustainable development goals aimed at achieving them by 2030. The goals include poverty alleviation, relief from hunger, good health and wellbeing, quality of education, and gender equality. In achieving these goals agriculture plays major role. The view of agriculture as a food producing activity is too narrow in approach. In the broader sense, agriculture is a multifunctional activity. It has a profound impact in several ways on our landscapes, local, national and global economies, and ecosystems benefitting human populations. Agriculture is a location-specific activity to produce food, fiber and feed. Agricultural research depends on inputs from a broad range of disciplines. This paper presents the efforts of international research centers in targeting the United Nations Sustainable Development Goals and the vital role of women and their involvement in international agricultural research.*

**Keywords:** CGIAR, Food Security, Gender Equality, Zero Hunger

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### **Introduction:**

The agricultural information transfer system consists of four independent, interrelated components: development, documentation, dissemination, and diffusion of information, which broadly correspond to generation, organization, communication, and utilization of information.

### 4 Ds of Agricultural Information Transfer

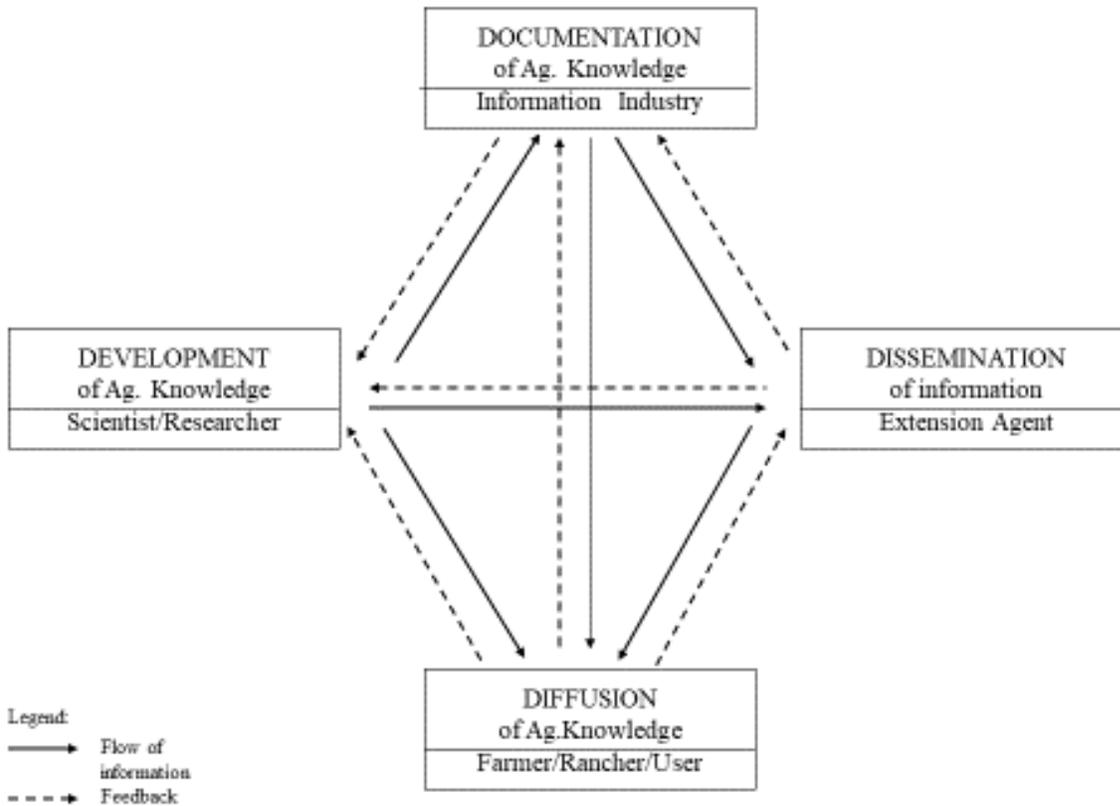


Figure 1

Agricultural research is increasingly a global undertaking and the continued productivity of farmlands rests to a large extent on joint efforts to uphold and improve yields. International agricultural research has contributed to human wellbeing and played a major role in making the Green Revolution possible. The Consultative Group on International Agriculture Research (CGIAR) with its 15 international research institutes depicted in Figure 2 below has been a major instrument for location specific research in various countries and sharing the results worldwide. Other research institutes and centers in various countries have equally contributed in achieving the United Nations Sustainable Development Goals.

### Other Research Centers

Other international research organizations for agricultural research include:  
 Food and Agriculture Organization of the United Nations (FAO)  
 Australian Centre for International Agricultural Research (ACIAR)  
 Japan International Research Center for Agricultural Sciences (JIRCAS)

# CGIAR Family

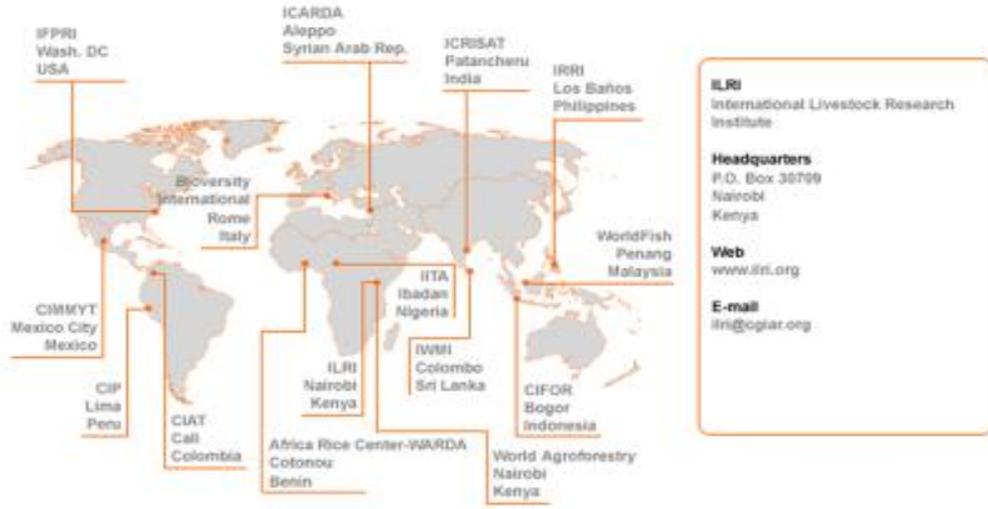


Figure 2

## The Role of Women in Sustainable Development

Agriculture is an important engine of growth and poverty reduction. However this sector is under performing in many countries in part because women, who are a crucial resource in agriculture and the rural economy, face constraints that reduce their productivity. The three pillars of food security are food availability or adequate food production, economic access to available food, and nutritional security. While drafting this paper my Googling in the internet on the “role of women in agriculture” has resulted in about nine million (8,820,000) hits in just 1.12 seconds. Unlike my search results, I want to present a broader picture about the key role women play in archiving sustainable development goals in international research. The proportion of women in agricultural production and postharvest activities ranges from 20 to 70%; their involvement is increasing in many developing countries, In 2015 the UN General Assembly formally accepted a new set of 17 measurable Sustainable Development Goals (SDG), ranging from ending world poverty to achieving gender equality and empowering women and girls by 2030. ([https://en.wikipedia.org/wiki/Sustainable\\_Development\\_Goals](https://en.wikipedia.org/wiki/Sustainable_Development_Goals))



Figure 3

## Women Feed the World

As is well known, a mother starts feeding a baby before it joins the world. Once a baby is born women become the sole source of food for the first six months. Undoubtedly women are the prime source of food for infants and children which means they hold the supreme role in creating a healthy future generation. Nutrition at this stage has a profound impact on the mental and intellectual capacity of the child. Nutrition is one of the goals of United Nations Sustainable development goals. Over 270, 000 plants are known to science of which 7 000 have ever been used for food of which 120 are cultivated today. Of these 120 plants, 90 cultivated plant species provide 5% of human food, 21 species provide 20% of human food, and 9 species provide 75% of human food. The vital role of agricultural research in selected CGIAR Centers and the role of women is mentioned in the following sections.

### International Rice Research Institute (IRRI):

IRRI develops new rice varieties and rice crop management techniques that help rice farmers improve the yield and quality of their rice in an environmentally sustainable way.

IRRI acknowledges that increased participation of women in agricultural research for development and extension will accelerate the realization of development goals, such as reducing

poverty and increasing food security. IRRI is working with women to empower them and strengthen their role in the design, experimentation, and evaluation of agricultural research for development, as well as improved access to resources and control over output. ([www.cgiar.org/about-us/research-centers/international-rice-research-institute-irri/](http://www.cgiar.org/about-us/research-centers/international-rice-research-institute-irri/))

### **International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)**

ICRISAT conducts research on five highly nutritious drought-tolerant crops: chickpea, pigeonpea, pearl millet, sorghum and groundnut. ICRISAT provides many services to rural women: training in improved farming and water conservation techniques and in post-harvest processing, the availability of affordable processing equipment, and the establishment of connections of women to credit facilities and markets. It further trains young women and helps them set up agribusiness ventures. (<http://www.cgiar.org/about-us/research-centers/international-crops-research-institute-for-the-semi-arid-tropics-icrisat/>)

### **Centro Internacional de Agricultura Tropical (CIAT)**

CIAT has global responsibility for the improvement of beans, cassava, and tropical forages – crops that have historically been neglected by research despite their vital importance for food and nutrition security. It also conducts research on rice and tropical fruits for Latin America and the Caribbean. **CIAT** focuses in devising strategies for strengthening women's role in agriculture. For example, the **CIAT** links up farmers to markets theme to incorporate gender approaches into its LINK methodology. This methodology helps farmers understand the current functioning of the market chain and key business models, **as well as to** design innovations that empower producer groups to engage more effectively and buyers to act in ways more amenable to smallholder farmers.

(<http://www.cgiar.org/about-us/research-centers/international-center-for-tropical-agriculture-ciat/>)

### **International Maize and Wheat Improvement Centre (CIMMYT)**

The Center works to sustainably increase the productivity of maize and wheat systems and thus ensure global food security and reduce poverty. For this it applies the best of biotechnology, traditional agronomy and breeding, socioeconomics, agricultural extension, and capacity building to create sustainable solutions with lasting impact and a strong focus on climate change, hunger, rural community development, and the environment. CIMMYT aims to enhance the relevance and overall impact of maize and wheat-specific interventions for smallholder farmers. Raising the productivity of these crops is essential to alleviate poverty and ensure food security. Through various projects, CIMMYT aims to address the challenges of gender equity to improve development potential.

<http://www.cgiar.org/about-us/research-centers/international-maize-and-wheat-improvement-center-cimmyt/>

**International Potato Center (CIP):**

CIP is truly a global center, with headquarters in Lima, Peru and offices in 18 countries across Asia, Africa, and Latin America. Working closely with partners worldwide, CIP seeks to achieve food security, increased well-being, and gender equity for poor people in root and tuber farming, and food systems in the developing world.

[\(http://www.cgiar.org/about-us/research-centers/international-potato-center-cip/\)](http://www.cgiar.org/about-us/research-centers/international-potato-center-cip/)

**Conclusion**

This paper has shown the key role that agriculture, specifically through the contribution made by international agricultural research institutes, plays in achieving the United Nations sustainability objectives. Essential to this is the participation of women in agricultural research activities, as well as the examination of gender equity issues.