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SAVING
LIVES
CHANGING
LIVES

Towards achieving Zero hunger in Guinea

Dr. Hyoun-Joon Lim (林亨俊), Country Director/Representative

21 June 2023

Hunger is every day's reality in Guinea

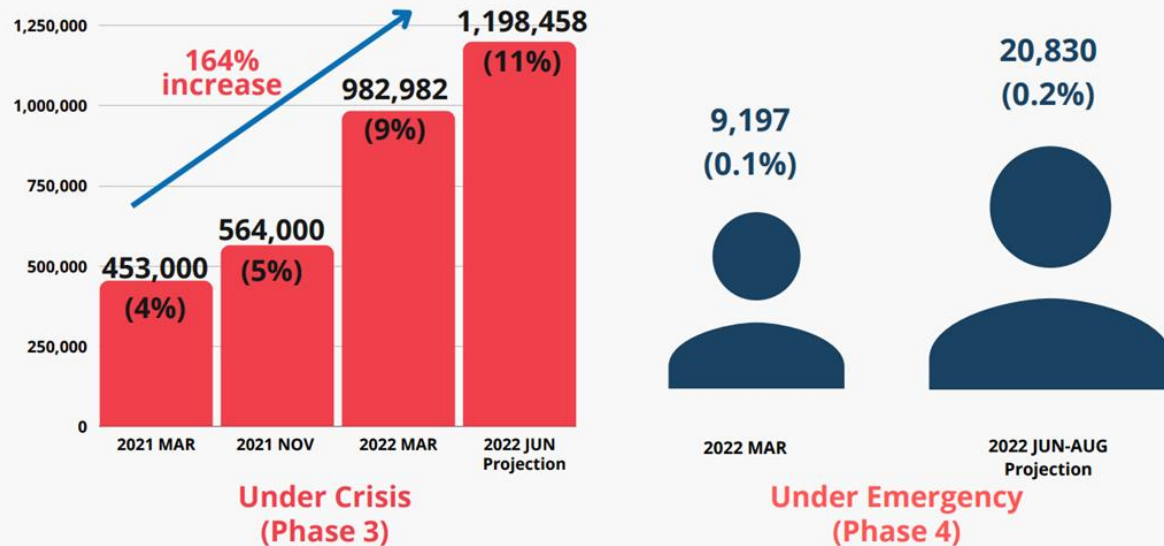
**Je ne mange qu'une fois par jour !
(I eat only once a day)**



Overall Food Security situation in Guinea

Guinea's Vulnerability Situation 2021 - 2022

Based on Cadre Harmonise Results March 2022



Guinea is a resource-rich country, possessing bauxite (the world's largest reserve and the second-largest producer of aluminum raw materials) uranium, gold, diamonds, and more.

It has great potential with 14 million hectares of arable land (1ha per person) and water resources in West Africa.

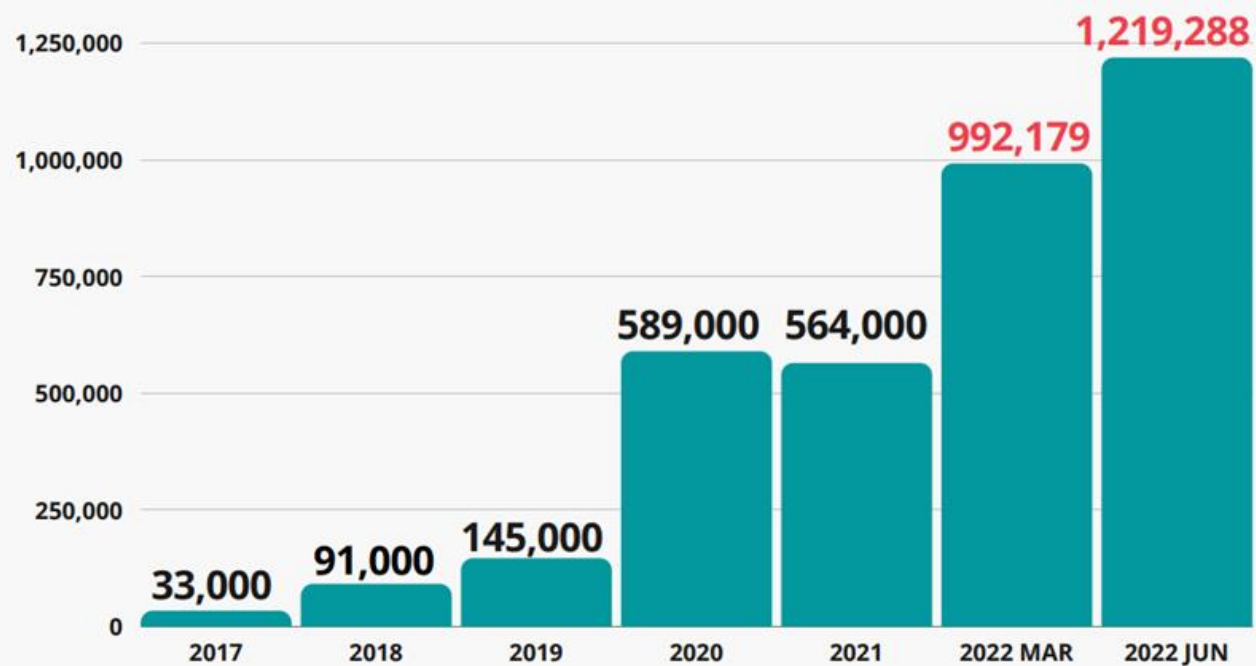
- However, **the food situation is worsening.**

IPC category

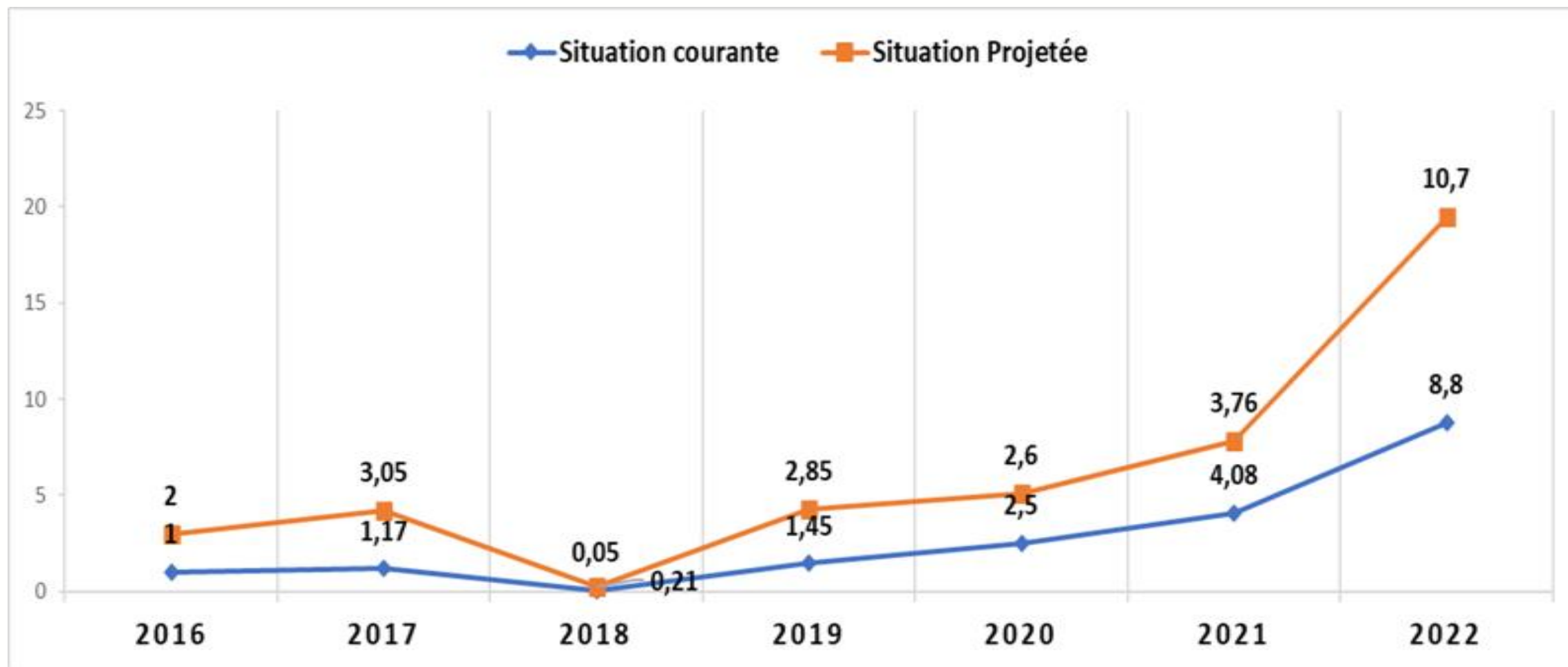
(3) Crisis, (4) Emergency, (5) Catastrophe/Famine

Trends in Guinea's food situation over the past six years.

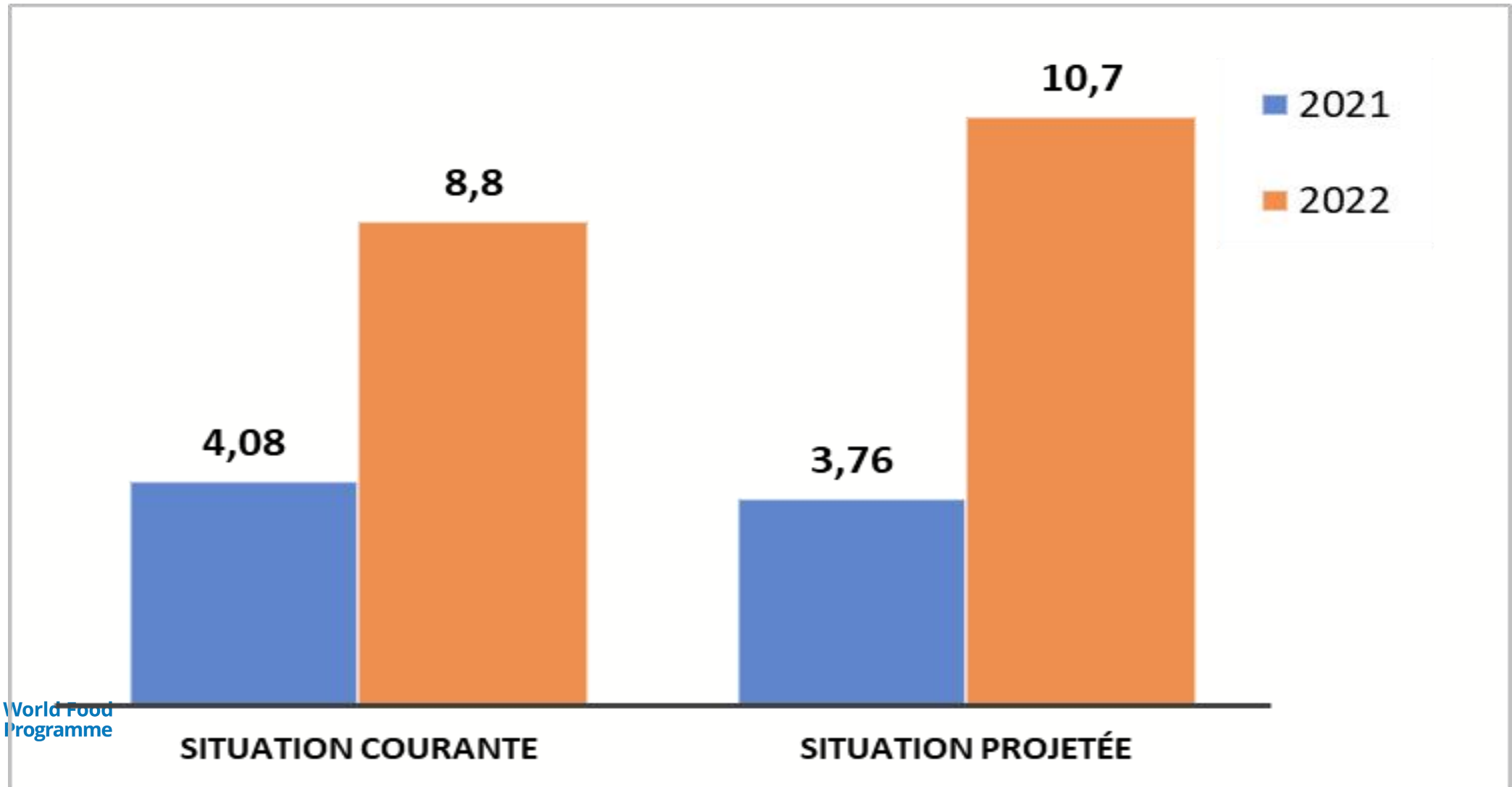
6-Year trend of Food Insecure population (Phase 3-5, 2017 - 2022)



Guinea's food situation trend (normal vs Lean season)"

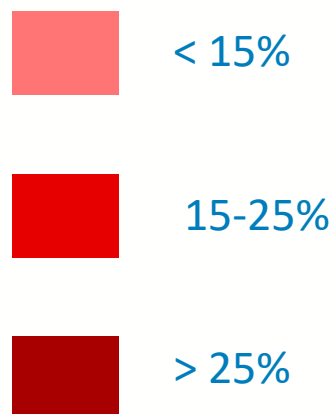


IPC/CH trends in the increase of food-insecure populations

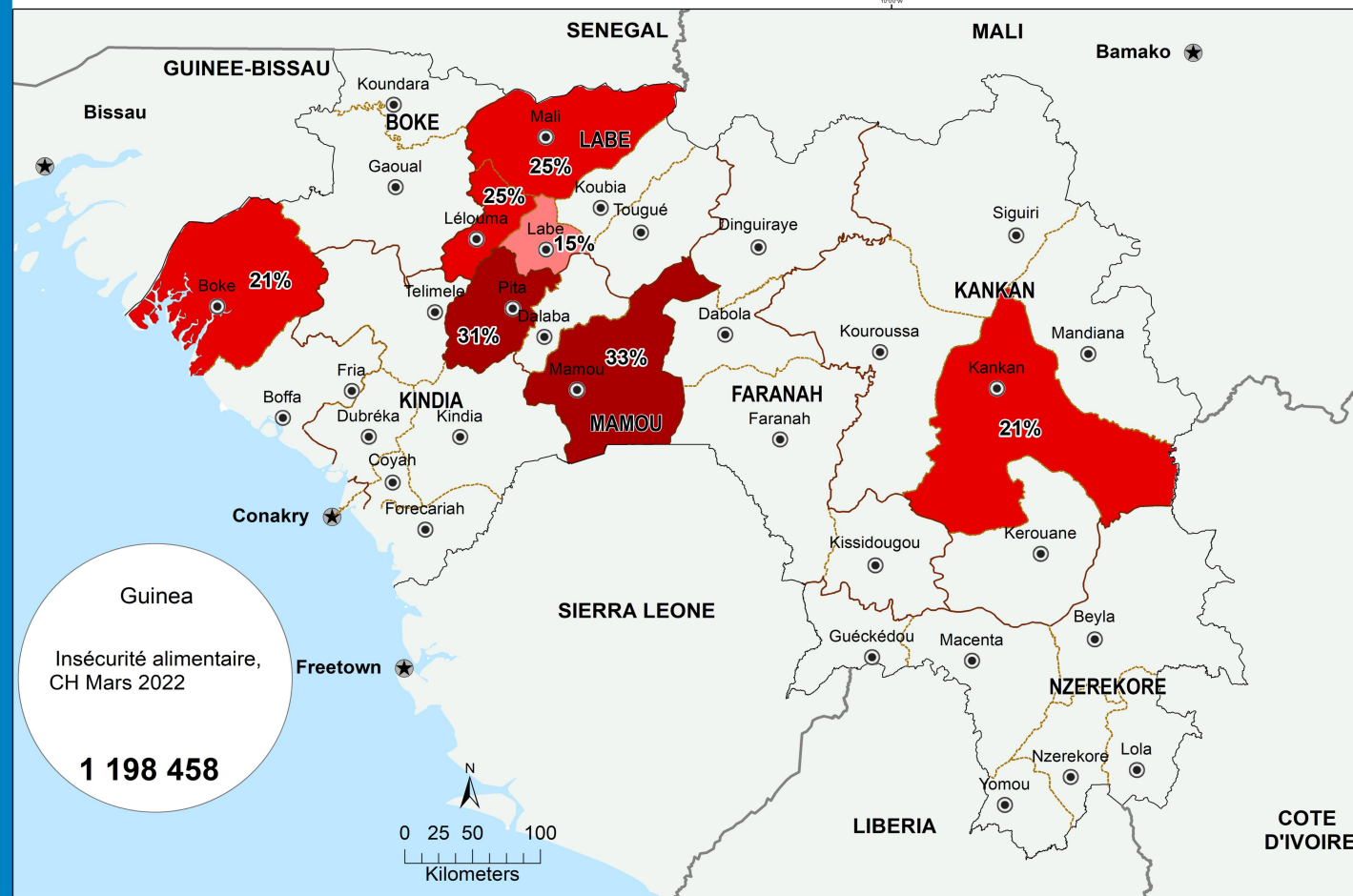


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IPC/CH "Food-insecure populations and regions in 2022

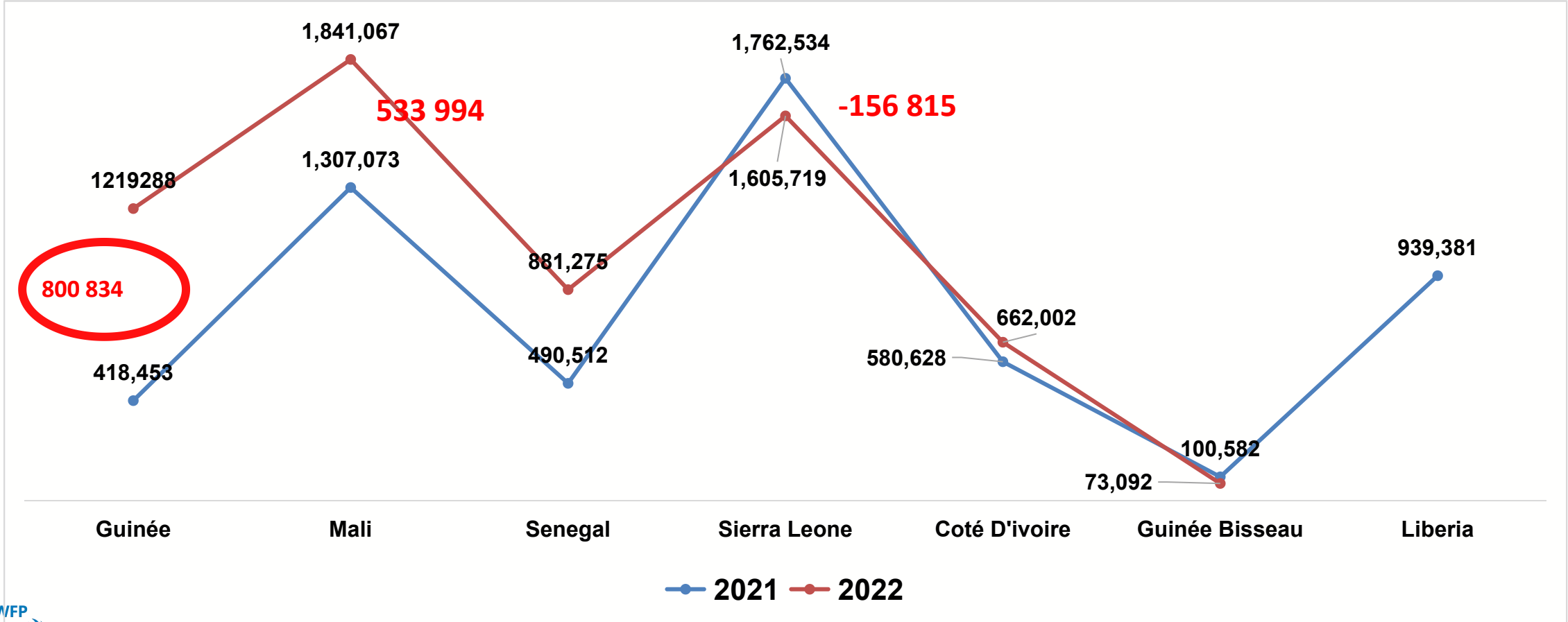


Republique de Guinée
Zones les plus touchées par l'insécurité alimentaire 2022

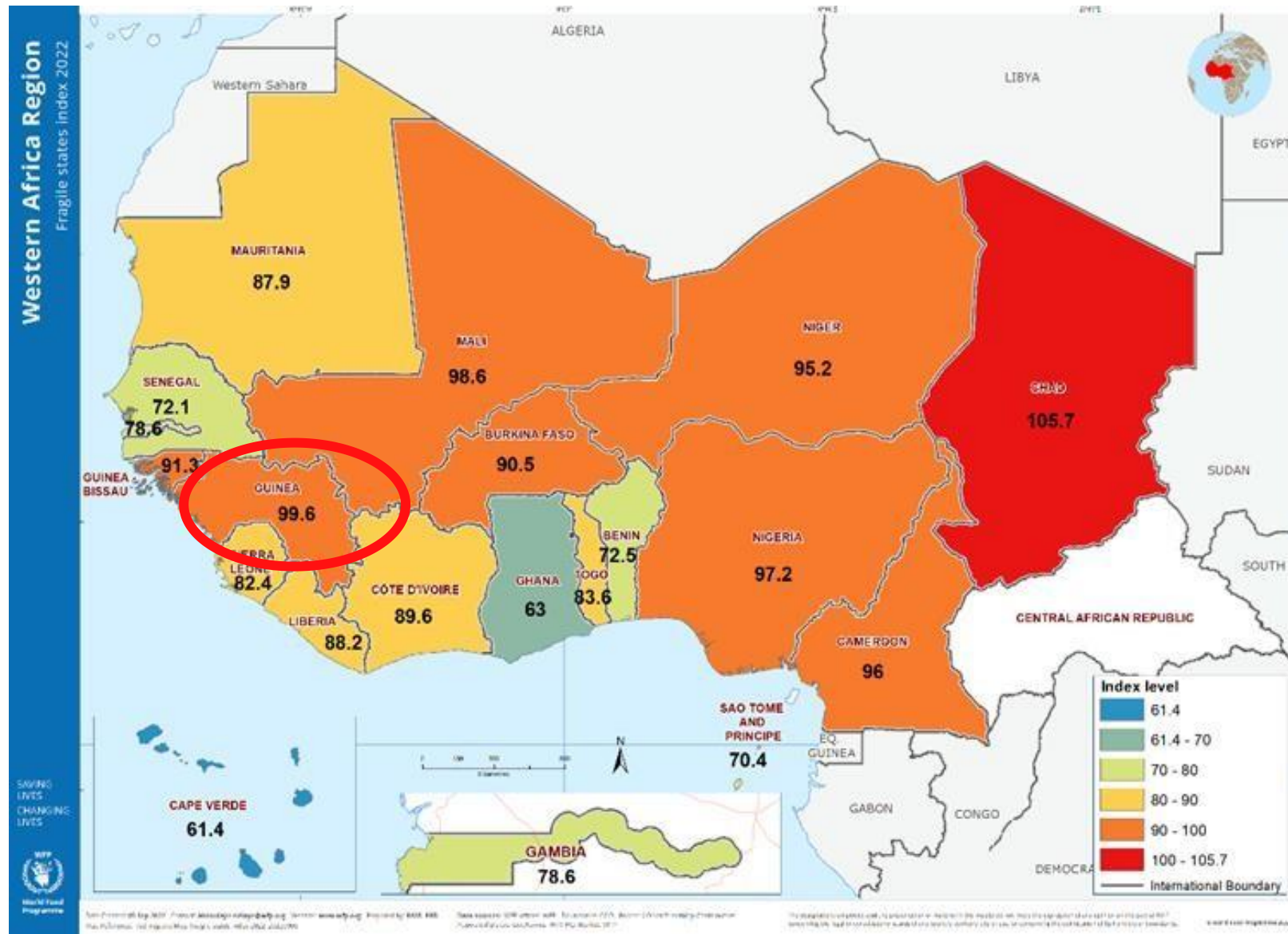


Guinea
Insécurité alimentaire,
CH Mars 2022
1 198 458

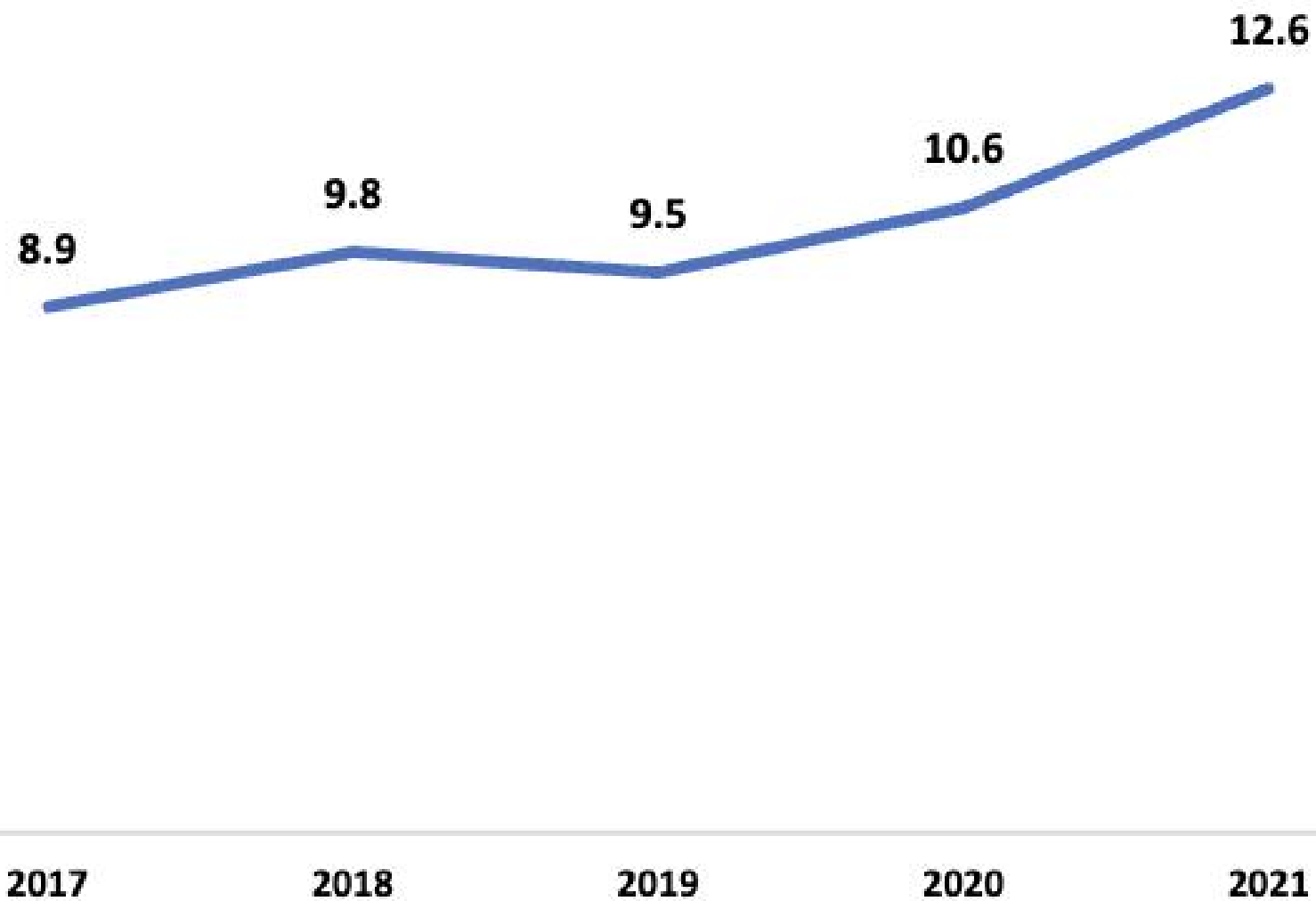
Comparison of Guinea's food security with neighboring countries (2021~2022)



Among the coastal countries of West Africa, Guinea has the worst food security situation, similar to that of the Sahel region



Inflation and the rising trend of food prices



past 5 years (high inflation due to

Produits vivriers	Variation					
	Juin 22/21 en %	Juin 22/Moy.5ans	Juillet 22/21 en %	Juillet 22/Moy.5ans	Août22/21	Août 22/Moy.5ans
		%		%		%
Riz Local Euvé	1,83	25,08	1,30	29,84	-2,09	32,74
Riz importé (Blanc)	8,31	18,16	-11,34	6,12	-11,60	20,01
Maïs net	19,75	51,80	11,33	48,69	-2,31	42,89
Fonio net	22,91	48,18	27,04	60,86	34,49	74,18
Mil	6,54	-8,77	6,79	-8,28	13,17	21,12
Sorgho	62,14	2,62	51,80	15,29	47,22	67,72



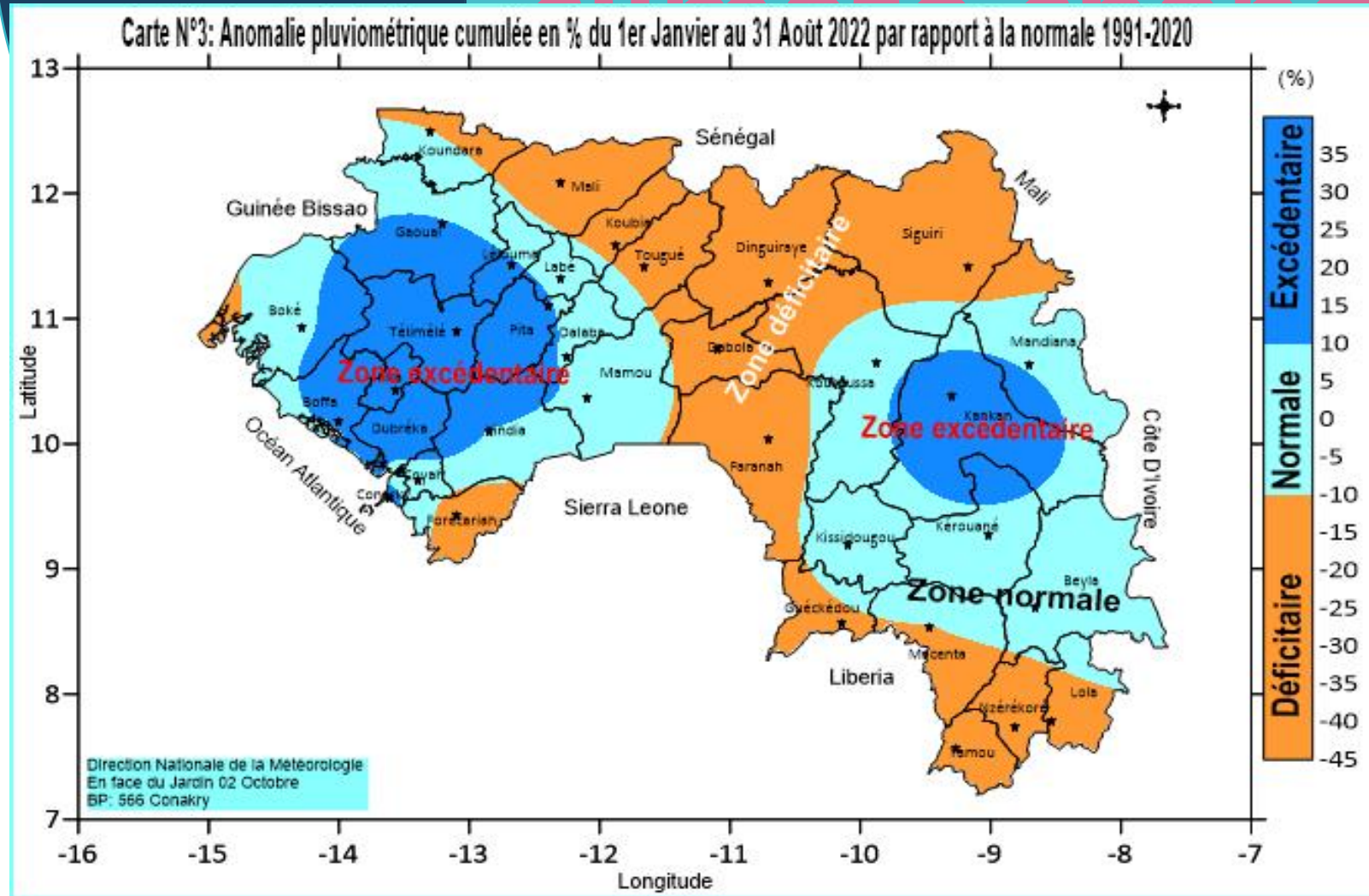
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Organisation des Nations Unies
pour l'alimentation
et l'agriculture

due to the

climate changes



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Source: Direction Nationale
de Météorologie 2022



Organisation des Nations Unies
pour l'alimentation
et l'agriculture

Food for thoughts

- Why, **despite having abundant natural resources, fertile land, and sufficient water resources**, is Guinea still a WFP beneficiary country?
- Why is **the food security situation worsening** instead of achieving actual cases of zero hunger?
- Given that **SDG deadline is 2030**, how can we **demonstrate that at least individual and community-level zero hunger is possible in Guinea** first and scale up to the national level?

Rice import of Guinea

- Guinea relies on overseas imports for **35% of its total rice consumption** (massive funding injection)
- **Almost tripled** the amount in 10 years
 - Annual imports of 260,000 tonnes in 2010
 - Annual imports of **700,000 tonnes of rice in 2020**

Vision of Guinean Government

- The Guinea government has declared **a vision of 'Zero Rice Importation'** and aims for **complete food self-sufficiency**.
- **Actions taken**
 - **The agriculture budget will be doubled in 2023**, and large-scale mechanization of the agriculture and livestock industry will be promoted.
- **Challenges**
 - **Weak capacity, infrastructure, and insufficient execution**
 - **Chronic corruption**

WFP came to help Guinea and South Korea in 1964



After 60 years

- Common things between ROK and Guinea
 - Colonized : Japan (Korea), France (Guinea)
 - Several Coup d'état, political instability
 - Both were very poor countries with serious food security issues.
- ROK graduated from WFP assistance in 1984, after one generation, it became top 10 WFP donor.
- **Guinea has been receiving WFP assistance nearly 60 years and is still suffering from food insecurity.**



GDP per capita in early 1960s

Country	US\$
Zimbabwe	283
Peru	280
Philippines	270
DR Congo	199
North Korea	137
South Korea	92

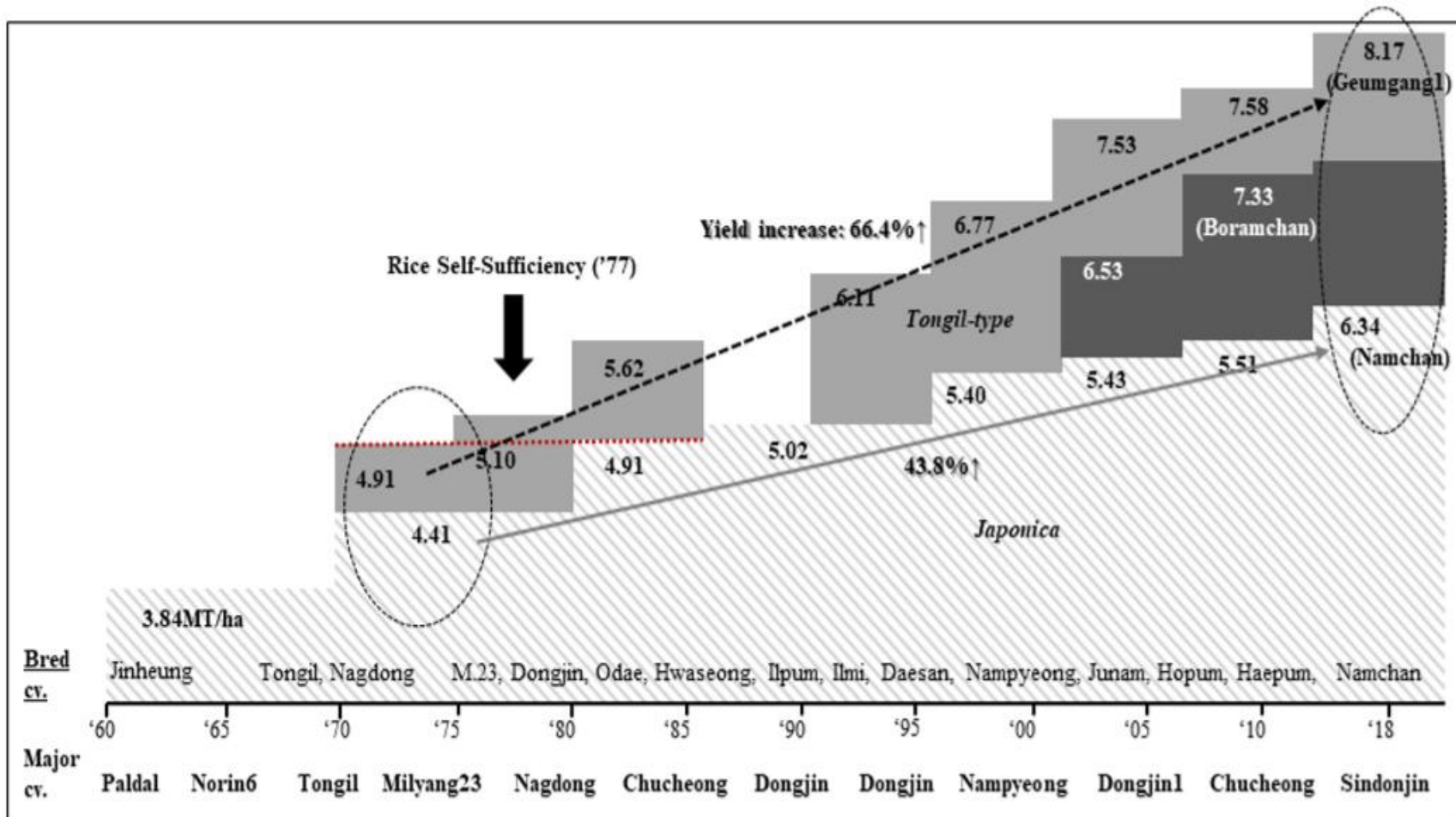
Borie Gogae (Extreme lean season from March-June)



“統一” Rice, a hybrid of japonica and indica was first developed in 1972, largely distributed in 1973 and **Korea achieved self-sufficiency in rice in just four years, in 1976.**



Productivity of Tongil Rice



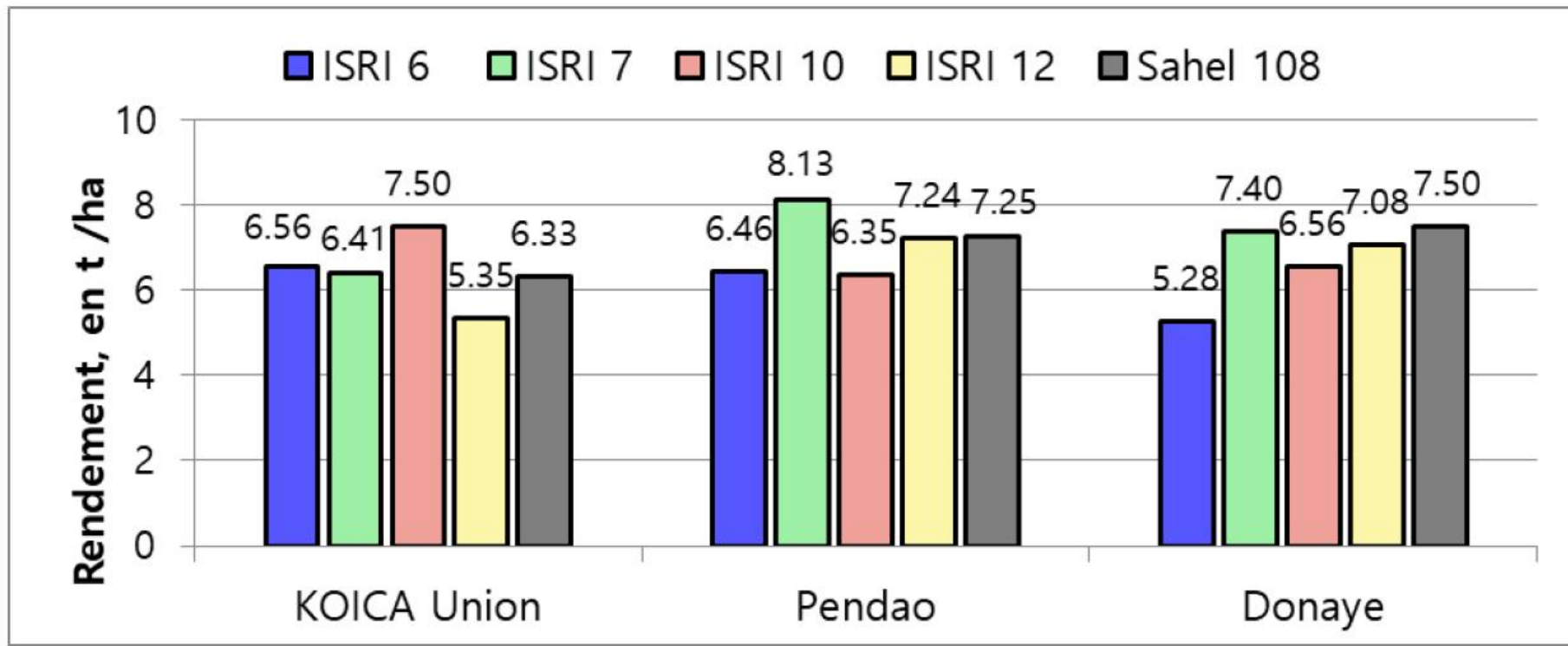
2.5 Overall of ISRIZ

Category	ISRIZ 6	ISRIZ 7	ISRIZ 10	ISRIZ 12	Average
Height(cmdd)	85	80	90	85	85
Dry season cycle	120	123	130	92	116.25
Cycle in wintering season	103	106	122	127	114.5
Potential yield (kg/ha)	13500	12500	11000	10500	11875
Yield in the peasant environment (kg/ha)	7224	7500	7000	4500	6556

Tongil rice test in Senegal over 10 years

3.1. The result

Average yield per variety for demonstration plots



“統一” Rice in Guinea (Feb 2022~)

- November 2021, CD requested Dr. Lee Sang-bok, Africa Rice to provide seeds of Tongil rice
- **1st pilot**
 - On February 25, 2022, Dr. Lee Sang-bok visited Nienh village in N'zerekore, Guinea, and planted **5 kilograms of Tongil rice and 5 kilograms of aromatic rice seeds on 0.5 hectares** of farmland.
 - On July 6, 2022, Guinea's first harvest celebration was held, with **a yield of 5.35 tons per hectare**.
- **2nd pilot (Aug-Dec 2022)**
 - A total of 11 project sites were selected, with one Zero Hunger Village each in seven provinces, and four agricultural technology schools (ENAE) were established on a total of **50 hectares to plant and expand the seeds 100 times**.
- **3rd pilot (ongoing)**
 - **900ha, 109 villages** have been selected and being tested to select the most feasible locations.



3rd pilot (ongoing)
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TONGIL TYPED RICE (G)

Guinea Experimentation in Nzerekore Region (Feb-June 2022)



February 25, 2022

AfricaRice Team brought 5kg of ISRIZ7 seed and 5kg of KR6517 seed to the Nzerekore Region.

TONGIL TYPED RICE (G)

Guinea Experimentation in Nzerekore Region (Feb-June 2022)



WFP chose to plant the rice seed in **Village Nienh**, Kobela Sub-prefecture, one of WFP's selected **Zero Hunger villages**.

TONGIL TYPED RICE (G)

Guinea Experimentation in Nzerekore Region (Feb-June 2022)



Dr. Lee demonstrating to the villagers **how to plant the seed.**

TONGIL TYPED RICE (G)

Guinea Experimentation in Nzerekore Region (Feb-June 2022)



TONGIL TYPED RICE (G)

Guinea Experimentation in Nzerekore Region (Feb-June 2022)



Early March



TONGIL TYPED RICE (G)

Guinea Experimentation in Nzerekore Region (Feb-June 2022)



March 27, 2022

WFP and the community planted

ISRIZ7 in 3744m²

KR6517 in 1890m²

TONGIL TYPED RICE (G)

Guinea Experimentation in Nzerekore Region (Feb-June 2022)



April 20, 2022

Conakry office received **weekly report** from the Nzerekore field office

TONGIL TYPED RICE (G)

Guinea Experimentation in Nzerekore Region (Feb-June 2022)



April 25-26, 2022

Pest Attack

After detecting the pest attack, WFP with the government pesticide expert treated the field in 1 day.

TONGIL TYPED RICE (G)

Guinea Experimentation in Nzerekore Region (Feb-June 2022)



April 29, 2022

TONGIL TYPED RICE (G)

Guinea Experimentation in Nzerekore Region (Feb-June 2022)



May 2, 2022

TONGIL TYPED RICE (G)

Guinea Experimentation in Nzerekore Region (Feb-June 2022)



June 8, 2022

TONGIL TYPED RICE (G)

Guinea Experimentation in Nzerekore Region (Feb-June 2022)



Tongil typed Rice (G)



Local Rice

June 8, 2022

Comparison between Toingil Rice and the local rice, which were planted on same day.

Result of 1st pilot

SO/Antennes	Préfectures	Villages	Superficie mise en valeur (ha)		Evaluation of yields by the square yield method (MT/ha)		Total_qtés attendues (MT)	
			Haut rendement	Arromatisé	High performance	Aromatized	Haut rendement	Arromatisé
Kankan	Kerouané	Farabana	3	2	5.3	5.2	16.0	10.4
	Kankan	Sanana	4	1	0	0	0.0	0.0
		ENAE_Bordo	0.5	0	0.0	0.0	0.0	0.0
Boké	Boké	Falaba	5.5	1.3	5	4.2	27.5	5.5
	Boffa	ENAE_Koba	0.25	0	1.8	0	0.5	0.0
N'zérekoré	N'zérekoré	Nienh	2.5	0.5	6.1	3.0	15.4	1.5
	Macenta	ENAE_Macenta	0.5	0	3.05	0	1.5	0.0
Kissidougou	Kissidougou	Pampako	3.9	0.62	3.4		13.3	0.0
Faranah	Faranah	Tinterba	6	1	5.1	3.4	30.5	3.4
Labé	Labé	Bawo Fello	0.19	0	2.5	0	0.5	0
	Mamou	ENAE_Tolo	0.25	0	3	0	0.75	0
Total			26.59	6.42	35.30	15.86	105.79	20.78

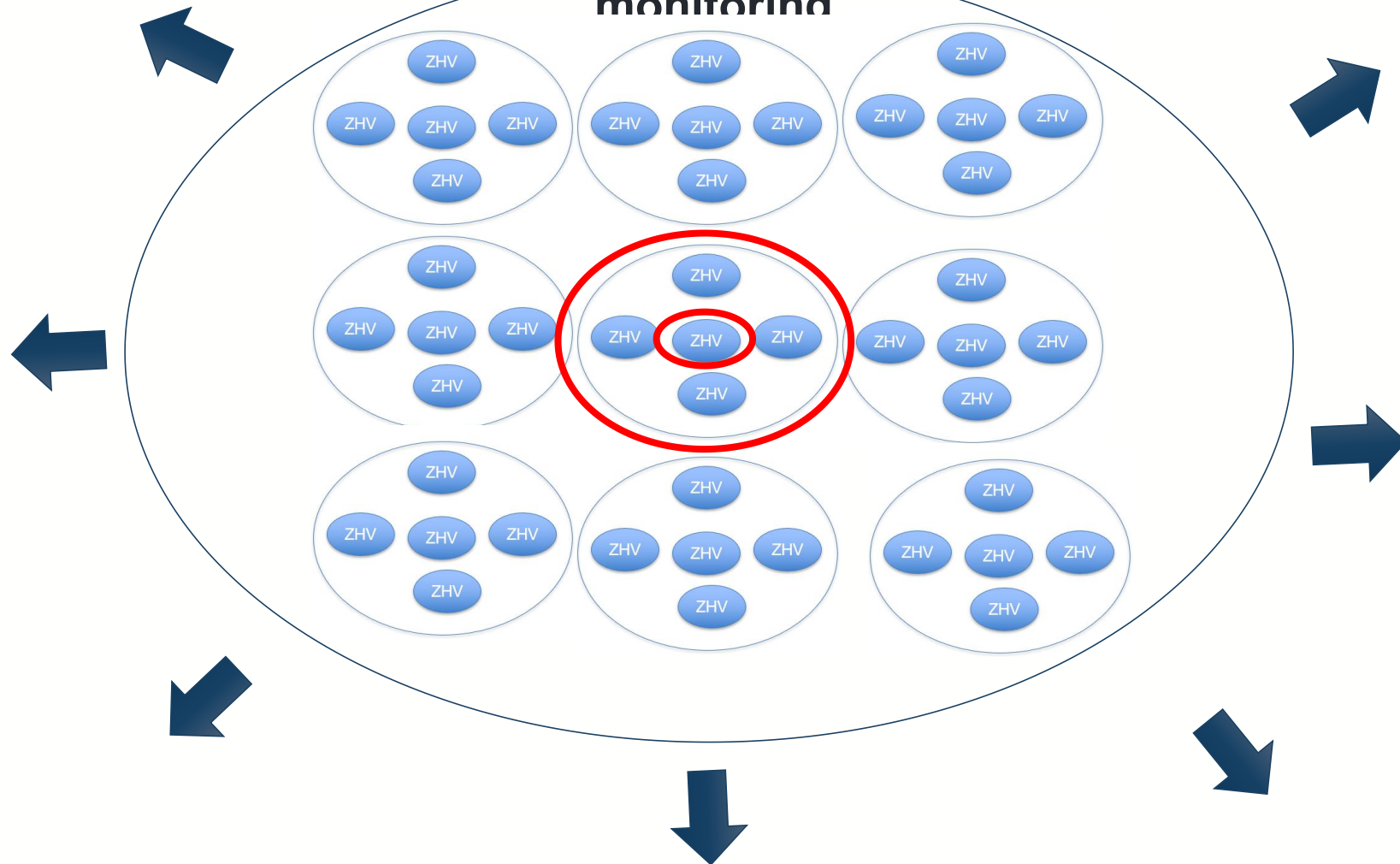
Tongil rice produces a minimum of 1.8 to 6.1 tons per hectare, while aromatic rice produces 3 to 5.2 tons per hectare.

Successful cases: excellent location selection, securing irrigation, active participation of residents, and support from government agencies.

Unsuccessful cases: agricultural schools (lack of resident participation during vacations, missed planting season), some areas did not receive expected rainfall due to climate change

Expansion plan

Subject to funding availability, new villages will be added to successful villages near their vicinity, expanding them into clusters for easier management and monitoring



2023 goal – 3 time harvest (Preparing new rice cultivation)



N'zerekore Nienh village – 28 January, 2023



11 February 2023



16 March 2023 & harvested in mid April 2023



"Go viral"



WFP Guinea's material support

- **IRAG:** supported with fertilizer, insecticide, herbicide etc.
- **WFP provides NFIs** - means of transport, agricultural equipment and irrigation related materials.



Comparison between Tongil rice vs local rice

Items	Local rice	Tongil rice
MT per HA	<u>800kg – 1.5MT</u>	<u>5-7^톤</u>
Time for harvest	<u>6 months</u>	<u>3 months</u>
Possible harvest per year	<u>1 time</u>	<u>2-3 times</u>
Total MT per year	<u>800kg-1.5MT</u>	<u>3.6-20MT</u>
Remarks	Only rainy season	If water is available, up to 3 times possible.

Success of Tongil rice

- 1. High yield:** Overwhelmingly higher yield compared to local rice in Guinea (in N'zerekore, the difference is **approx. 15 times**).
- 2. Good taste:** High Indica content combined with Japonica's stickiness, matching the taste preferences of Guinea's population (Tongil rice price 7,000-8,000 while local rice is 5,000)
- 3. Zero hunger is indeed possible.** Significantly increased harvest leads to 1) **100% household demand met**, 2) **additional income secured through surplus production sales**, and 3) **further investment opportunities** expanded through multipurpose business.



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Challenges of Tongil rice

- **Lack of infrastructure:** Lack of large-scale water infrastructure (irrigation and reservoir facilities) necessary for crop management, as well as a shortage of agricultural machinery and agricultural technology/capacity.
- **Pests and diseases:** Sufficient experimentation is needed for resistance to local pests and diseases in Guinea.
- **Timing:** Additional research and experimentation are needed on the rapid climate change and regional planting and harvesting times in Guinea.

In order to achieve Guinea government's goal of food security with zero rice imports

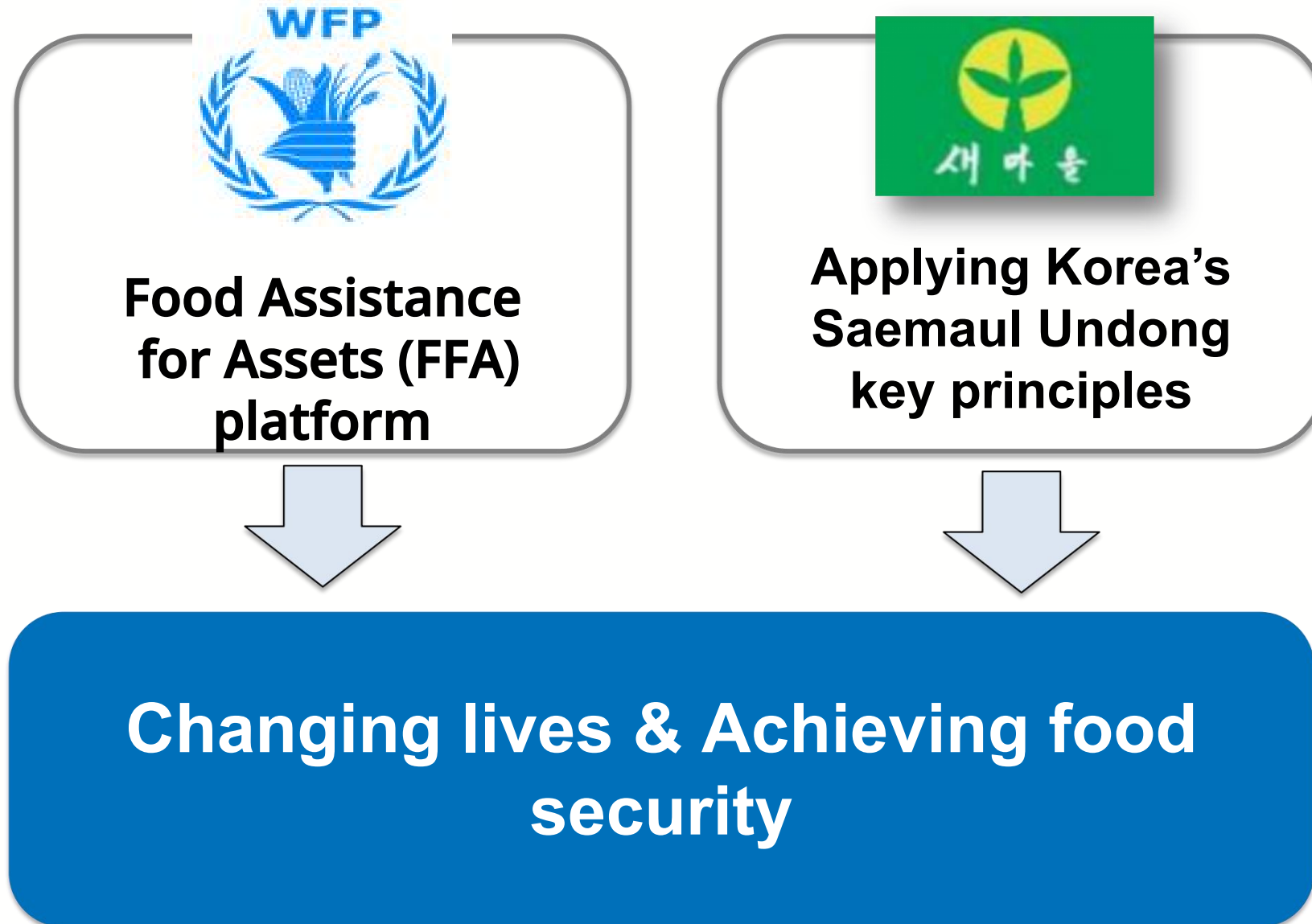
- If 7 MT of rice are harvested per hectare, with three harvests per year, the total production would be 21 tons per year. With 33,333 hectares of land, it can achieve 0 import as the annual production would be 700,000 tons.
- With 100,000 hectares of land dedicated to Tongil rice cultivation, it would be possible for Guinea to become a rice-exporting country with an annual production of 2.1 million tons.

Achieving Zero hunger with value chain

- **Creating a value chain and achieving practical zero hunger** through the **'Zero Hunger Village' project**, applying the principles of the Saemaul Undong (New Community Movement).
- **By integrating** key WFP activities at the village level.
 - Nutrition programs for infants, pregnant and lactating women,
 - School feeding programs for elementary school students, and
 - Income-generating programs scattered throughout the country into local communities



The principles of the Saemaul Undong (New Village Movement) are being applied to the WFP's livelihoods platform (pilots in 4 countries 2011-2019)



Shown as a successful case in “World Development”, a prestigious global development journal

World Development Journal – Bangladesh & Tanzania



“As it helps to secure long-term development, the SZHCP provides a model for sustainable development”

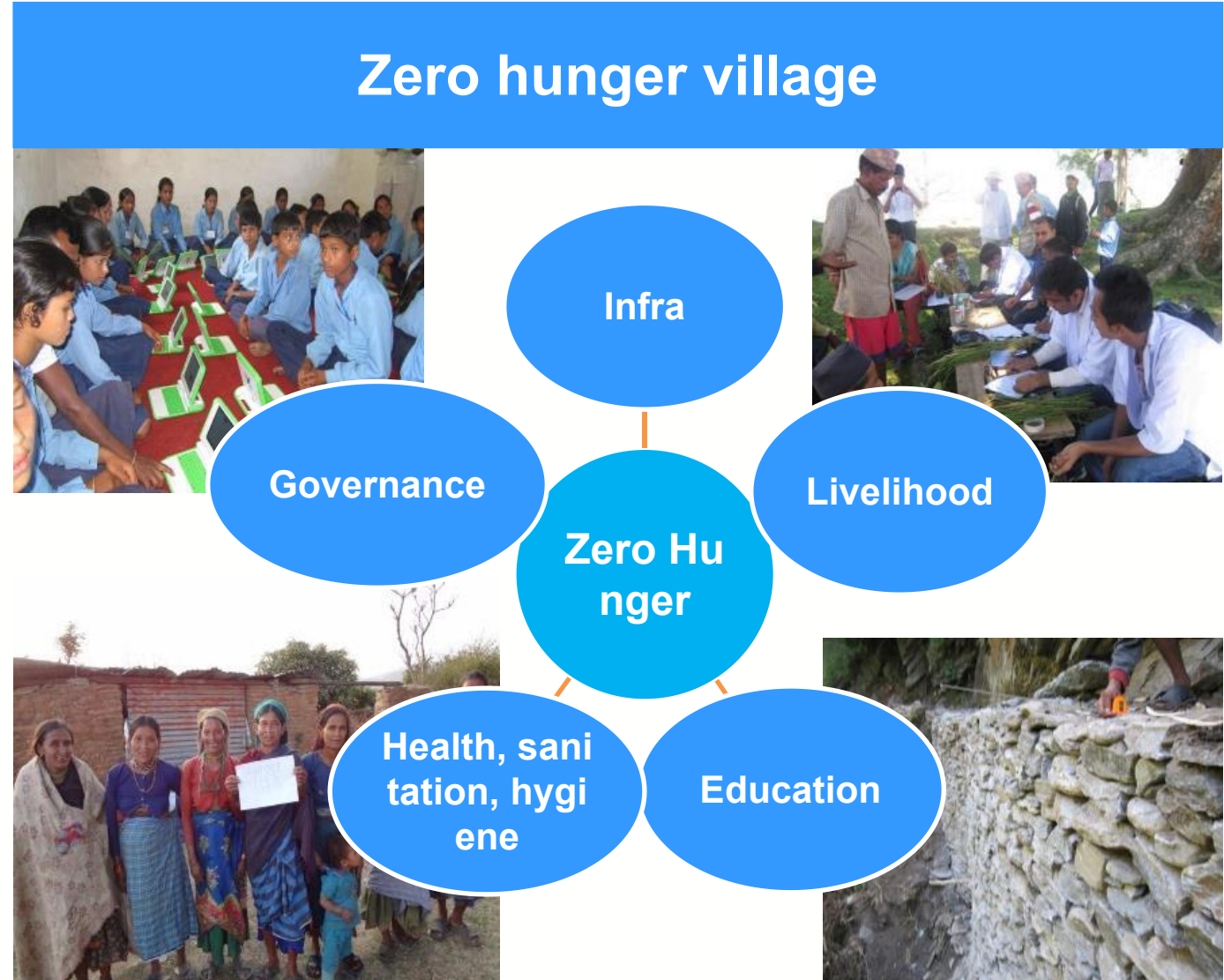
“Due to the **concrete achievements** of the SZHCP, the **WFP now has a new model** for addressing both **food security and long-term development**”

“SZHC significantly improved the livelihoods and beneficiaries in relation to Zero Hunger, and also increased income generation and promoted positive social changes”

“It has also helped strengthen the capacity of communities to **run development projects themselves**”

Concept of Zero Hunger Village

- The main projects of WFP (nutrition support, school feeding, and livelihood/income enhancement) are being **combined with the success factors and principles of the Saemaul Undong to create Zero Hunger Villages.**
- The clear goal is **to establish a sustainable value chain within the village** and achieve zero hunger within two years.



Zero hunger village value chain

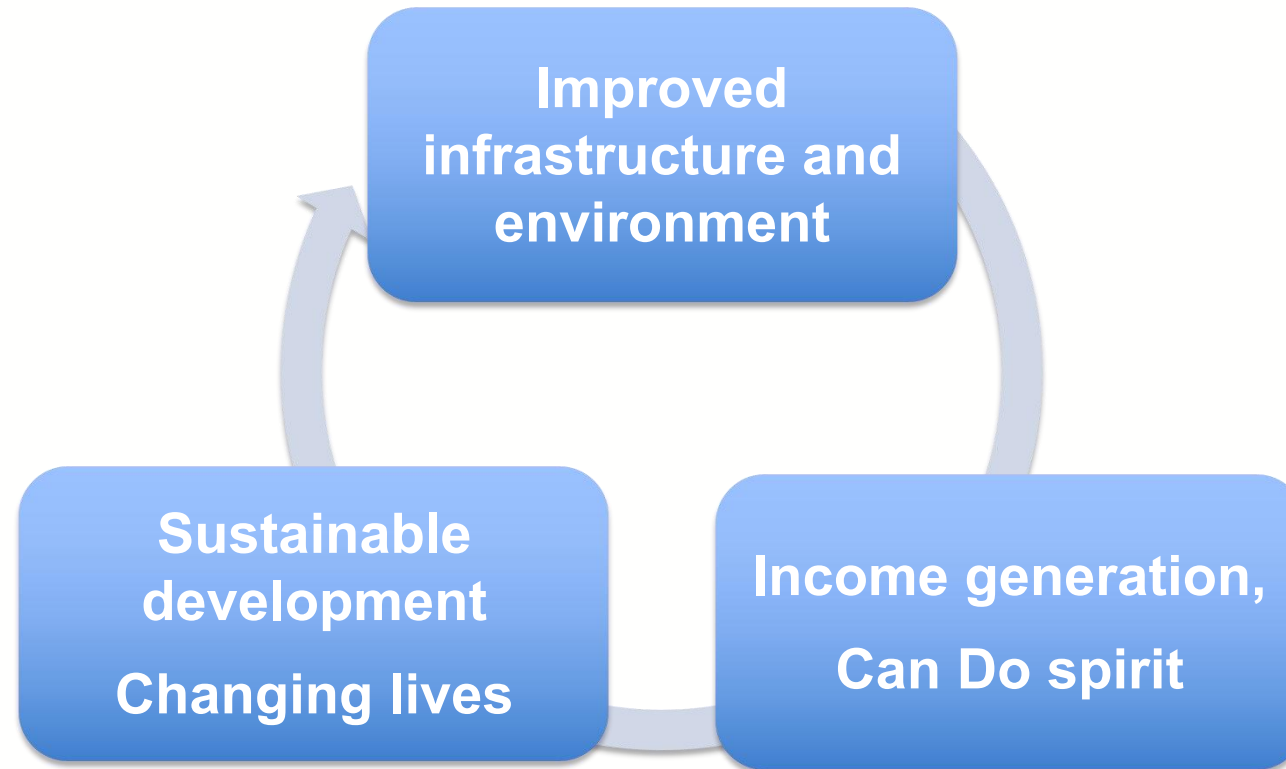
- The program aims to **achieve full self-sufficiency** after the end of WFP's 2 years support.
- Through sufficient education and capacity building of the village community, WFP supports them to **become major market players**.
- **Successful villages will be used as models to add new villages and gradually expand into larger clusters."**
- Thanks to the village level integration of key activities, WFP benefits from **reduced transportation costs and reduced time for food distribution**.

5 key principles of ZHVs

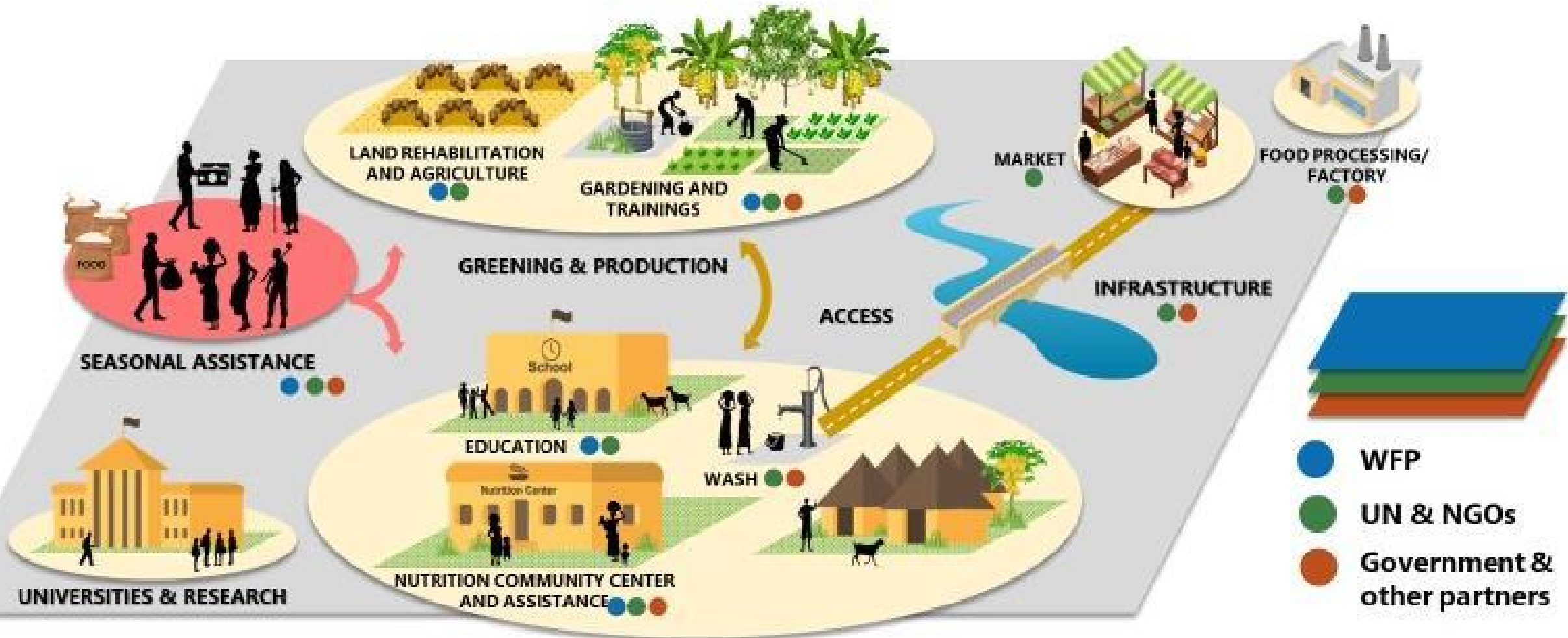
- The following core principles from the Saemaul Undong and SZHC are being applied:
 1. **Autonomy:** Residents directly select the desired project
 2. **Leadership:** A promising village leader is elected by residents at a general meeting and plays catalyst role
 3. **Direct contribution (up to 30%) from villagers** for their own projects
 4. **Competition and differential support by performance:** Providing more support to villages with excellent projects **through inter-village competition**
 5. **Mentality change:** Promoting income enhancement through environmental improvement, gaining confidence/awareness, and ultimately, infrastructure development.
- *** Entrepreneurship:** Successful projects will be expanded through multi-project development (expanding income sources *from rice cultivation to*

Zero hunger village model

Virtuous cycle of value chain



Zero Hunger Village overview



Future expansion plans for Zero Hunger Villages in Guinea:

1. **Expansion by cluster** (currently 11 areas -> focusing on 3-4 key areas): **words of mouth** - > Interest and support requests from neighboring villages where the project is performing well **create synergy**. Easy management and monitoring.
2. **Developing a large seed complex**/local purchasing system (by Korean government).
3. **National scale up** – Well established model, Government buy-in, Creating synergy through close collaboration with the government/IFIs/Donors/other UN agencies (One UN).

COMMUNIQUÉ

Dans le but de participer activement à l'autosuffisance alimentaire en République de Guinée, le Président du CNRD, Président de la Transition, Chef de l'État, Chef suprême des Armées, Colonel Mamadi DOUMBOUYA a ordonné en Conseil des Ministres du 10 mars 2022 à tous les membres du gouvernement de participer à la campagne agricole à travers la réalisation d'au moins 50 hectares de cultures.

Le Président de la Transition se réjouit de l'adhésion des ministres et du succès qu'à enregistré cette activité.

Dans la même lancée, le Président de la Transition est heureux d'annoncer au peuple de Guinée, que la totalité de sa récolte personnelle et les 50% de celles des membres du gouvernement seront reversées aux cantines scolaires des différentes localités du pays, et ce, pour aider les jeunes apprenants.

Le ministre de l'Agriculture et de l'Élevage, le ministre de l'Enseignement pré-universitaire et de l'Alphabétisation prendront attache avec les autres membres du gouvernement afin d'identifier les zones de culture et de proposer dans un bref délai un plan de répartition.

Le Président de la Transition reste convaincu que l'action de chacun et de tous permettra de parvenir à l'autosuffisance alimentaire. Il invite par la même occasion l'ensemble des populations à s'investir dans la promotion de l'agriculture.

Conakry le 29 Décembre 2022

Porte-parole de la Présidence


Colonel Amara CAMARA

**Presidential Communique,
(2022.12.20)**

**PM and each minister is
instructed to donate 50% of
their rice harvest to school
feeding from their own land.**



K-rice belt in Africa

- All started from Guinea when ROK MoA minister visited Kissidougou in October 22.
- Minister reported to ROK president and **K-rice belt in Africa officially launched**
- From 2024, ROK will support 7 African countries (Guinea, Guinea Bissau, Senegal, Gambia, Cameroon, Uganda and Kenya).
- 150 million USD 2024-2027,
- 300 million USD from 2028



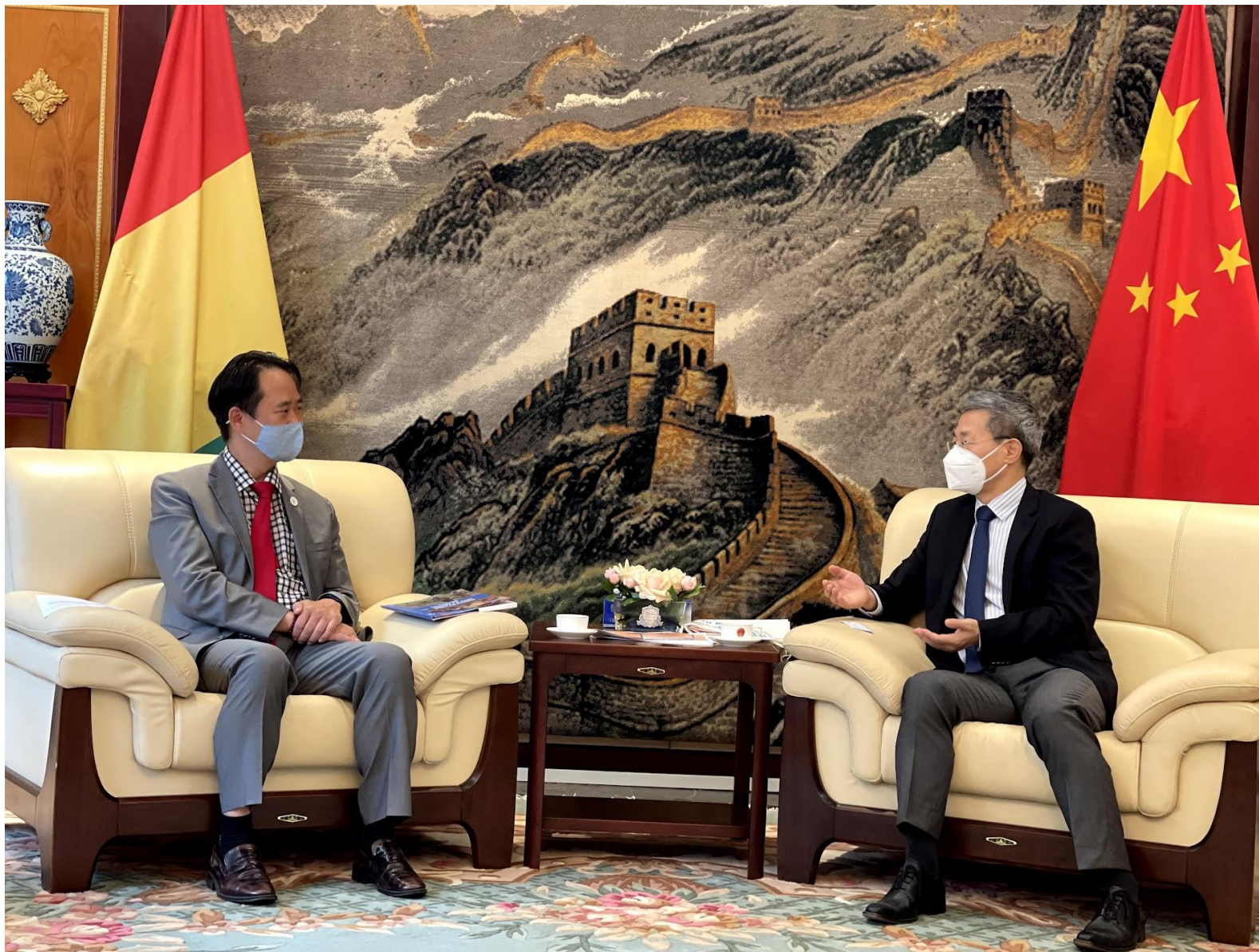
China & WFP rice cultivation in Guinea – Yuhan seeds CO in Boke



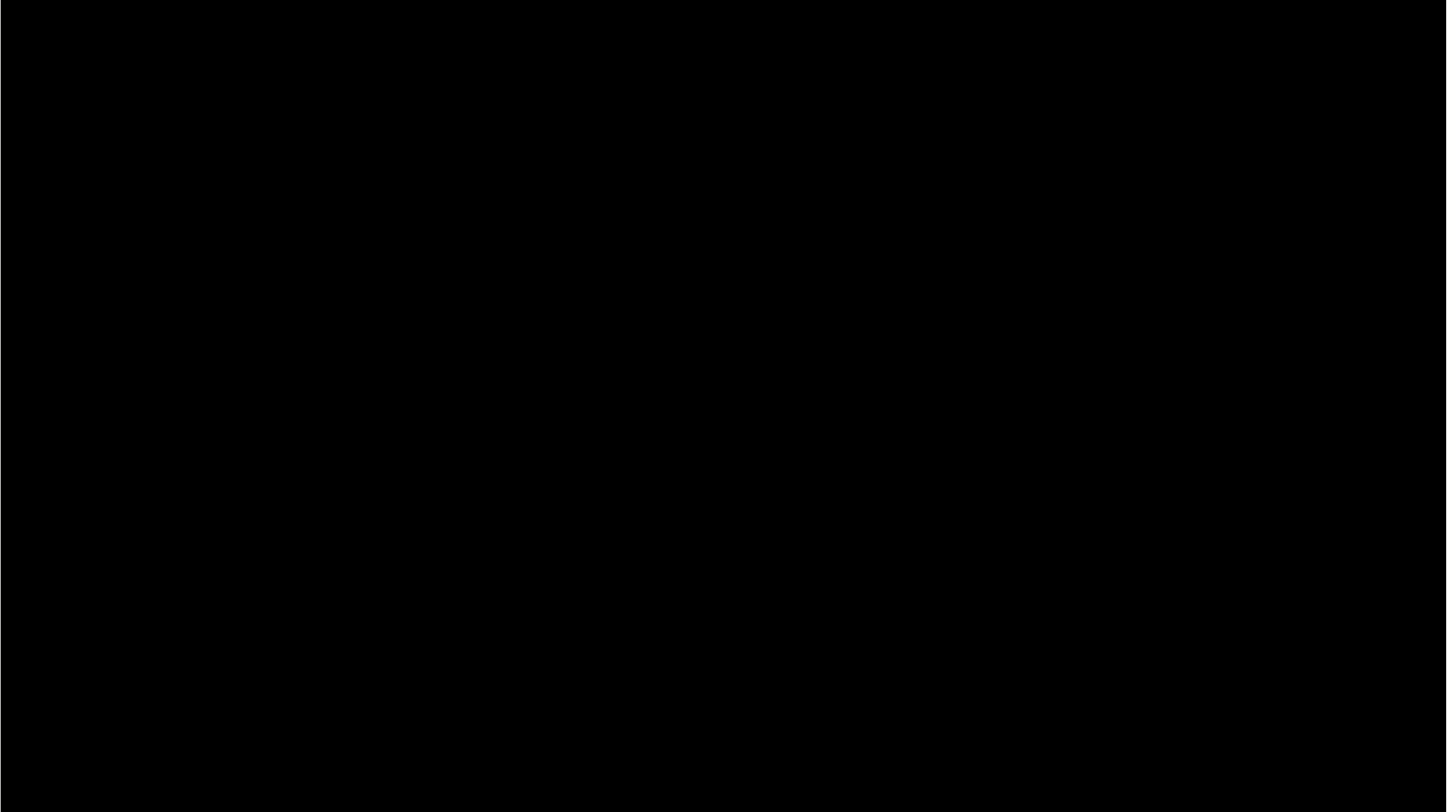
5ha rice harvest pilot with a Chinese company



Close relationship with Chinese embassy in Guinea



“Did you achieve Zero Hunger?”



Achieving Zero hunger is now happening in Guinea



Can we achieve zero hunger?

General McArthur said,



- It will take at least 100 years to rebuild Korea.
- **The poorest country in the world without hope**



China overcame hunger and became a key player of South South cooperation



If Koreans and Chinese can do, why not Guinea?



Merci Beaucoup!

