



International Union Against Tuberculosis and Lung Disease

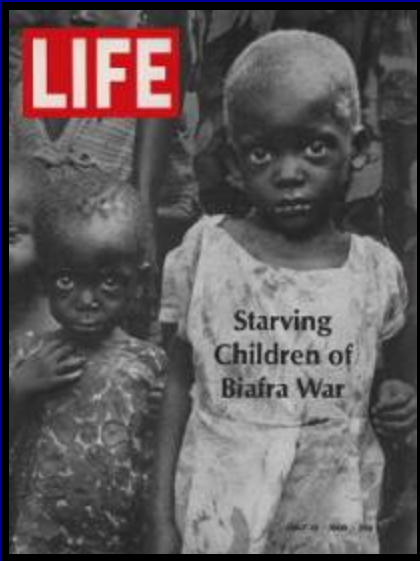


“Plumpy’Nut”

How acceptable is it for malnourished pregnant & lactating women in a slum setting in Bangladesh ?

Engy Ali , Rony Zachariah, Zubair Shams, Tajmary Akter , Marcel Manzi, Lieven Vernaeve ,Petra Alders , Jenny Soderberg ,Flavio Salio, Malik Allaouna , Bertrand Draguez , Pascal Delchelvarie, Anthony. D. Harries

Medecins Sans Frontières Brussels – Luxembourg, Bangladesh
International Union against Tuberculosis and Lung disease, Paris, France
London School of Hygiene and Tropical Medicine, London, UK.



BIAFRA 1968



FAMINE

MSF experience



THAI
BORDER
1979



ETHIOPIA 1985



ANGOLA 2002



The medical relief organization Medecins sans Frontieres (MSF) estimates that at least 1.5 million people are suffering from acute malnutrition.

BBC WORLD

SUDAN 1998



NIGER 2005



BANGLADESH



BANGALADESH

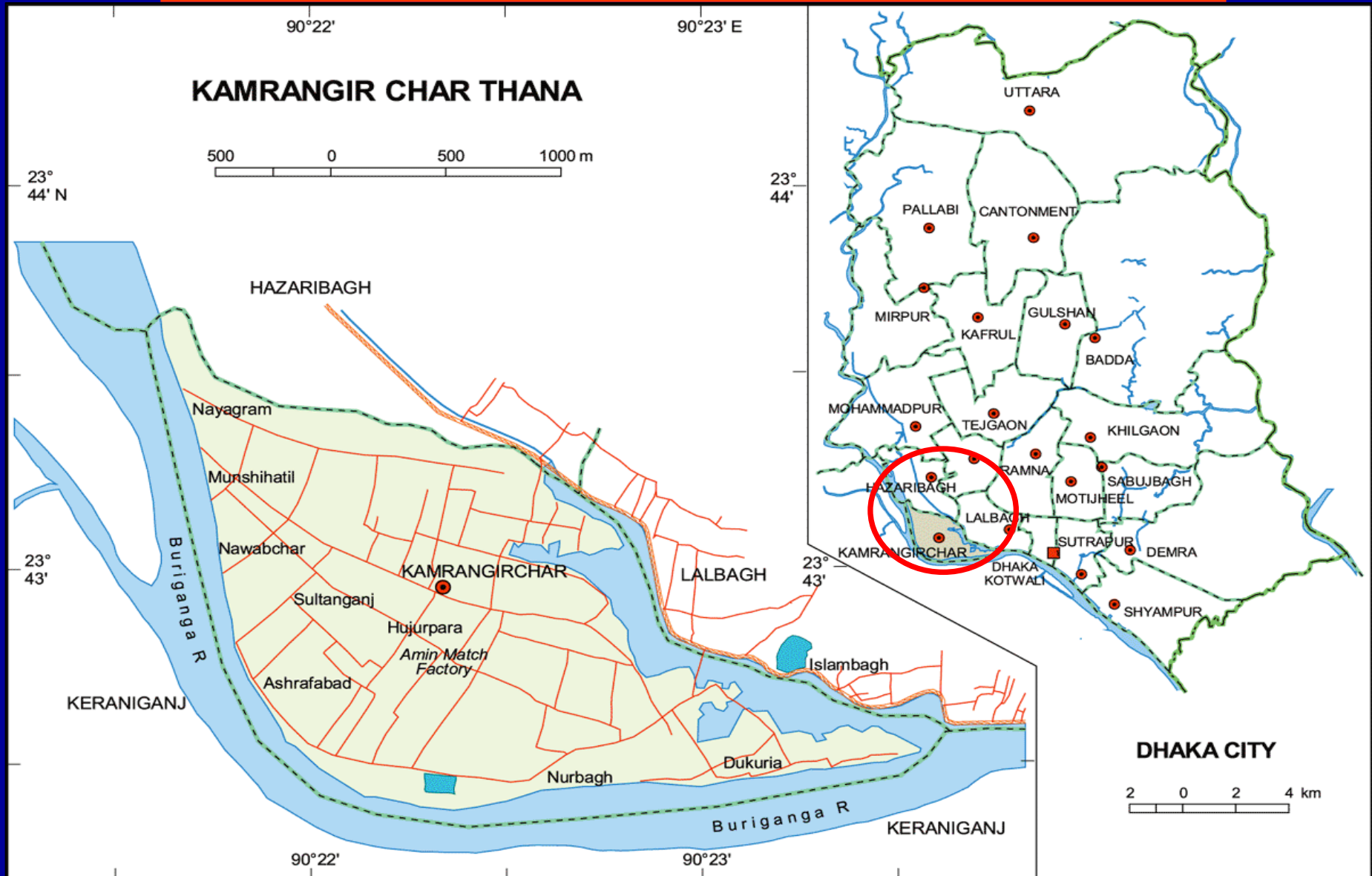
Pregnant & Lactating Women

Malnutrition

- Among the highest in the world (30%)
- ⇒ Adversely affects the health of the mother
- ⇒ Low birth weight

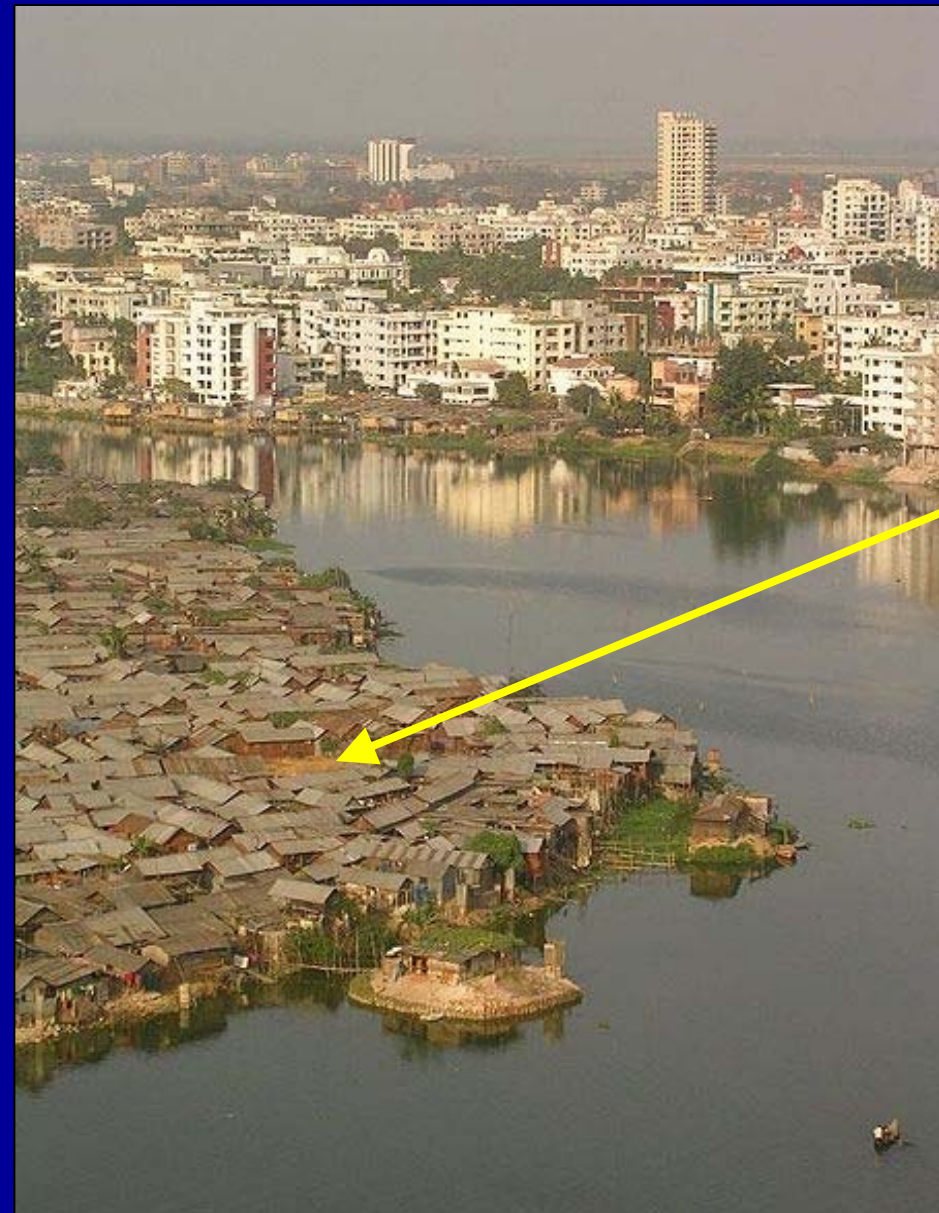


Kamrangirchar Slum- Dhaka 2010



Population

- **Inhabitants: 400,000**
- **Area: 3.1 km²**
- **Density : > 100,000/km²**



Urban Slum



Poverty



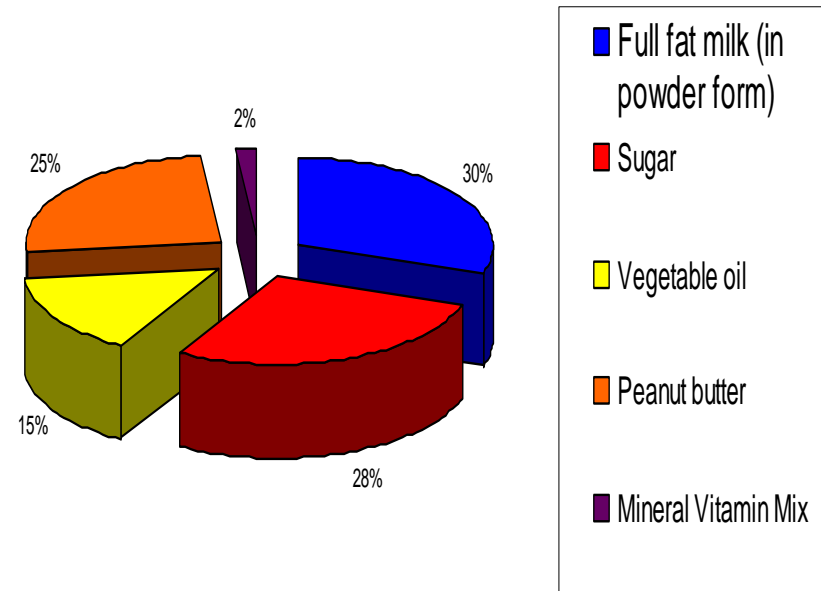


Plumpy'Nut

Ready To Use Therapeutic Food (RUTF)



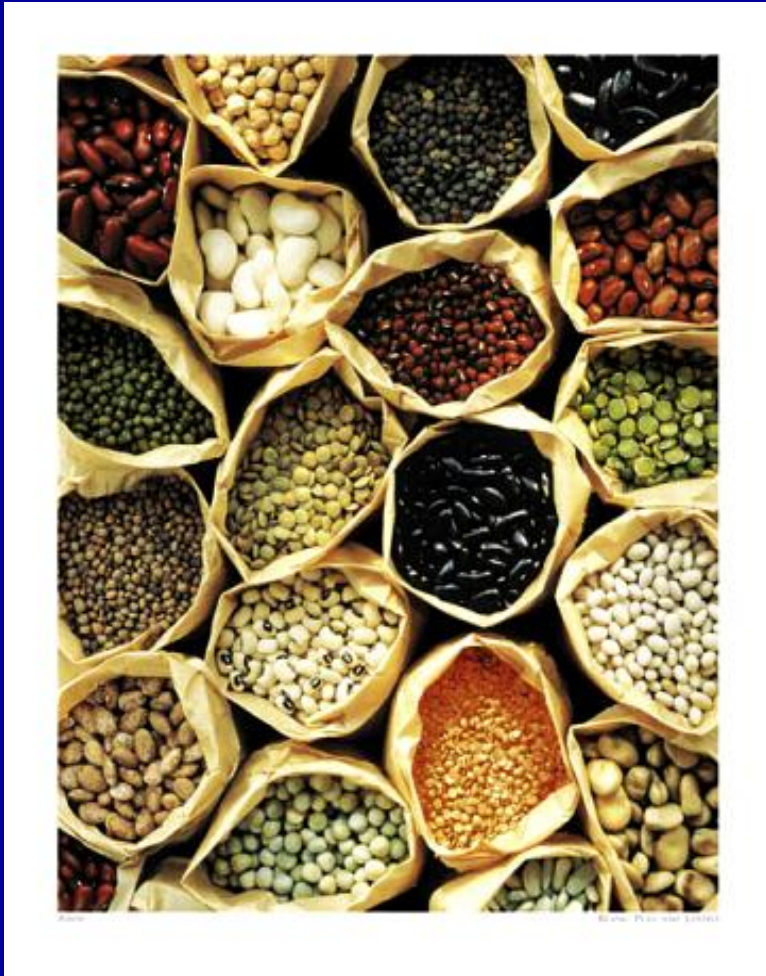
Ready to Use Therapeutic Food Composition



Africa - Plumpy'Nut



Bangladesh – Lentils



How acceptable is plumpy'nut among pregnant and lactating mothers ?

Objectives

In an urban slum setting in Bangladesh to:

**Assess the acceptability of Plumpy'Nut
among pregnant and lactating women**

Methods (1)

Study Design: Semi-structured questionnaire

Period: May- July 2011

Site: Kamrangirchar Slum

Study Population: All Pregnant/lactating women-
Malnourished or at risk
(6 weeks on PPN)

Package of Activities

Methods (2): Screening Community



Methods (3): Screening Primary Care Clinics



Methods (4): Pregnant & Lactating Women

Admission

- Severe acute malnutrition (MUAC <170 mm or nutritional oedema)
- At risk of malnutrition (MUAC <210 mm)

Discharge

- MUAC > 220 mm
- Oedema improved
- No medical complications

Duration of treatment: 2- 5 months

Also offered:

- Antenatal and postnatal care
- Curative care
- Referral

Methods (5)

Community Mobile Outreach



Methods (6)

Health Education / Cooking Demonstrations



Methods (7): Tracing Losses to Follow Up



Methods (8): Plumpy'Nut (PPN)

Questionnaire Survey

Socio-demographic information

Acceptability (Perception)

- Taste, Smell, Color, Consistency
- Side effects
- Packaging

Interviews

- 3 trained community workers (Local language)
- Pre-tested Questionnaires

Ethics approval

- MSF & Union

Plumpy'Nut- Acceptable

If women did not perceive any problems of undesirable *taste, smell, color, consistency* or *side effects* anytime during the intake

Results (1)

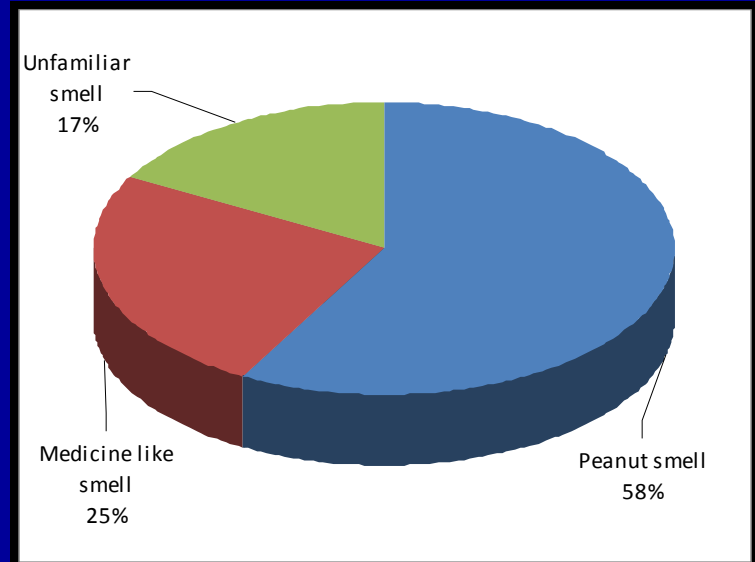
Characteristics

Total PLW	248
Age (years, IQR)	20 (18-24)
Housewives	99 %
Lactating	209 (84%)
Income (\$ / day)	2.5
Illiterate	30%
Duration PPN (weeks)	15 (6-28)

Results (2) : PPN -Acceptability

Total PLW	248
Package instructions not understood	102 (41%)
Did not accept PPN	193 (78%)
Reasons for unacceptability	
– Undesirable taste	60%
– Unwelcome smell (Peanut based smell)	43%
– Consistency	13%
– Color	4%
– Attributed side effects: nausea, vomiting, diarrhoea, abdominal distention & pain	39%
Complete rejection	12 (5%)

Results (3) : PPN - Acceptability



Results (4): Plumpy'Nut Therapeutic Value

212/ 248 (85%)

of

**Pregnant and lactating
women perceived
PPN to be beneficial**



Conclusion (1)

In one of the first studies from South Asia

- **Acceptability of Plumpy'Nut in a slum setting was very low**
- **Eight in ten women do not like PPN for nutritional rehabilitation - a serious concern as PPN is a food product**
Need for an alternative !
- **Nutritional agencies and manufacturers need to intensify efforts towards developing adapted RUTF for the local context.**

Conclusion (2)

This study also highlights the important role of operational research in showing that it is not enough to continue doing

“more of the same”



Acknowledgements

Many thanks to our patients, the interviewers and the MSF staff working in Kamrangirchar.