RESILIENT FOOD SYSTEMS
FOOD SECURITY & NUTRITION
FOR ALL

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M. Cristina Tirado-von der Pahlen
Lead Author of the IPCC AR6 WGII & of the
IPBES Nexus Assessment Climate Energy Food Water Health
Biodiversity

WFP
World Food Programme
ESCAP75
Asia-Pacific Symposium on Agrifood Systems Transformation
Asian-Pacific complex Risk Landscape

- South Asia has one of the largest proportions of undernourished children in the world:
  - stunting, wasting, and underweight
  - micronutrient deficiencies (iron, vitamin A, and zinc).
- Undernutrition pose a major threat to socio-economic growth in the Region
- Pacific SIDS have some of the highest rates of dietary-related Non-Communicable Diseases.

- Increasingly severe, diverse and interlinked risks:
  - Climate change, Natural hazards
  - Environmental/ecosystems degradation
  - Water salinization
  - Population growth + rapid unplanned urbanization

Drivers of risks to food systems
  to food production, food access, food safety, food utilization, livelihoods, education, further impacting malnutrition in all its forms.
Moving from crisis response to risk management (WFP, 2019)
The ability of individuals, households, communities, cities, institutions, systems and societies to prevent, resist, absorb, adapt, respond and recover positively, efficiently and effectively when faced with a wide range of risks, while maintaining an acceptable level of functioning without compromising long-term prospects for sustainable development, peace and security, human rights and well-being for all.

Risk < > Resilience
Systemic risk is decreased when key nodes are resilient
### RESILIENCE CONCEPTUAL FRAMEWORK

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<tbody>
<tr>
<td>Institutional</td>
<td>Ecosystem</td>
<td>Landscapes</td>
<td>Exposure</td>
<td>Nothing. (Avoided Disturbance)</td>
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<tr>
<td>Community</td>
<td>Energy Systems</td>
<td>Food System</td>
<td>Vulnerability</td>
<td>Bounce back better</td>
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<tr>
<td>Household</td>
<td>Water System</td>
<td>Water System</td>
<td>Resilience Capacities (Capitals, Resources, etc.)</td>
<td>Bounce back</td>
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<td>Resilience to What End?</td>
<td>Collapse</td>
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</tbody>
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- **Resilience for Whom?**
  - Institutional
  - Ecosystem
  - Landscapes
- **Resilience of What?**
  - Food System
  - Water System
- **Resilience to What?**
  - Conflict, instability
  - Climate extremes
  - Economic shocks
  - Pandemics | Plagues
  - Poverty & inequality

*Global Report on Food Crises, 2020*
CAPACITIES OF RESILIENT FOOD SYSTEMS

When current Food System is no longer sustainable

To evolving risk scenario & compounded risks

Region, time-period, system complexity, actors, institutional structures, etc..

UNFSS Resilience Scientific Paper, 2021
Strengthen economic, environmental, social foundations while building capacities to anticipate shocks, manage risks, absorb, adapt to risks, or transform food systems when not feasible.

Guarantee that all people within food systems are empowered and entitled to stand instability, ensuring interventions and ethical, equitable, participative.

Coordinated action in areas vulnerable to multiple risks & stressors with a systemic approach: water-food-energy nexus, HDP nexus, One Health.

Enabling broad participation, co-governance by fostering tricentric governance where states, social markets and collective actions thrive.
TRANSFORMATIONAL PRINCIPLES TO BUILD FOOD SYSTEMS’ RESILIENCE

INTEGRATIVE & CROSS-CUTTING
Nexus Water-Food-Energy | One-Planetary Health | Multi-hazard Early Warning Systems

RESILIENCE
Individual
Household
Community
Landscape
Institutional

DIVERSITY and REDUNDANCY
Livelihoods, Food Systems, Knowledge, Cosmo-visions

SUSTAINABILITY
Agro-ecological Production
Sustainable & healthy diets
Circular Economy
Low carbon, short supply chains; zero waste; Intergenerational

ETHICAL, EQUITABLE TRANSFORMATIVE
Reframing narratives, principles, values, consumption,

PEACE and SOCIAL COHESION
Humanitarian development Peace Nexus (HDP)
Youth-led reconstruction Funds

CO-CREATION & KNOWLEDGE SHARING
Customary & Contemporary | Technological/Social Innovations |
Early Warning Systems / Geo-spatial data

ANTICIPATORY
• DRR, Shock-responsive Social Protection
• Risk Management, Insurance
• Infrastructure

CONTEXT-SPECIFIC
SIDS, CBA, Territorial, Urban & rural

RIGHTS-BASED APPROACHES
Participation, non-discrimination, equality, legally justiciability, accountable. Gender-responsive voice & agency

CLIMATE RESILIENT DEVELOPMENT*
adopts adaptation & mitigation measures to secure a safe climate, eliminate poverty and enable equitable, just and sustainable development.

TRI-CENTRIC GOVERNANCE
• Enabling state
• Social markets
• Collective actions

Tirado, Vivero-Pol et al. 2022
EXAMPLE
Nexus approaches to Water, Food and Energy:
Entry points to help achieve food system resilience

- **Ensuring** adequate, reliable and equitable water and energy access for local people and food systems’ actors
- **Optimizing** the use of local water and energy from farm to fork
- **Reduce** water and energy related risks to producers and food system actors
- **Stimulate** innovations in renewable water and energy along the food system
- **Manage** trade-offs of competing water and energy demands across scales and sectors
The Integrated Risk Programming Asia-Pacific

UNDERSTAND RISKS AND VULNERABILITIES
- Analyse R&V over short and long term
- Research impact of climate change on food security/nutrition
- Identify future drivers of risk and vulnerability

BUILD SYSTEMS AND CAPACITIES
- Strengthen national/local capacities/systems for anticipatory actions
- Support proactive approaches to reducing/managing risks
- Scale up innovations on anticipatory actions

STRENGTHEN LOCAL ADAPTATION
- Reduce hazard risk and build communities’ resilience
- Support communities to adapt to climate change
- Adapt innovations to the local context

CLIMATE-PROOF VALUE CHAINS
- Climate-proof rural infrastructure and assets
- Strengthen resilience of value chains across the different components

WFP, 2022
Feasibility and effectiveness assessments of multisectoral adaptation for food security and nutrition

Climate change impacts on food security and nutrition
Key risk: Malnutrition in all its forms linked to decline in food availability and increased cost of healthy food

Adaptation option
- Climate-resilient, nutrition-sensitive and agroecological food production
- Sustainable and healthy diets (local, equitable, diverse)
- Access to health, nutrition services and healthy environments (water and sanitation)
- Early warning systems to prevent adverse effects on nutrition
- Nutrition-sensitive social protection
- Nutrition-sensitive risk reduction, risk sharing and insurance

Feasibility dimensions
- Economic
- Technical
- Institutional
- Social
- Environmental
- Geophysical

Enabler relevance
- Women empowerment
- Education
- Humanitarian Development and Peace nexus
- Rights-based approach and good governance

Assessment results
- Low
- Medium
- High

na = not data or not assessed
SUSTAINABLE FOOD SYSTEM FRAMEWORK

HL Panel of Experts on Food Security & Nutrition, 2020
Climate resilient development pathways

- Reduced climate risks – adaptation
- Reduced GHG emissions – mitigation
- Enhanced biodiversity
- Achieved the SDGs