

# A conceptual framework for agency and behavior change in agri-food systems transformation

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INITIATIVE ON  
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## Background

Systems transformation is increasingly recognized as necessary to improve the sustainability, equity, and resilience of agri-food systems. This requires a shift away from linear narratives of innovation development, adoption, and impact that dominate in agricultural research for development.

The CGIAR Initiative on Agroecology takes a systems transformation approach to agroecological transition in eight countries. Understanding actors' behaviors and agency in this initiative requires a complexity-aware perspective that considers how wider structures and conditions enable or impede behavior change and innovation, with attention to actors' power and agency.

## Methods

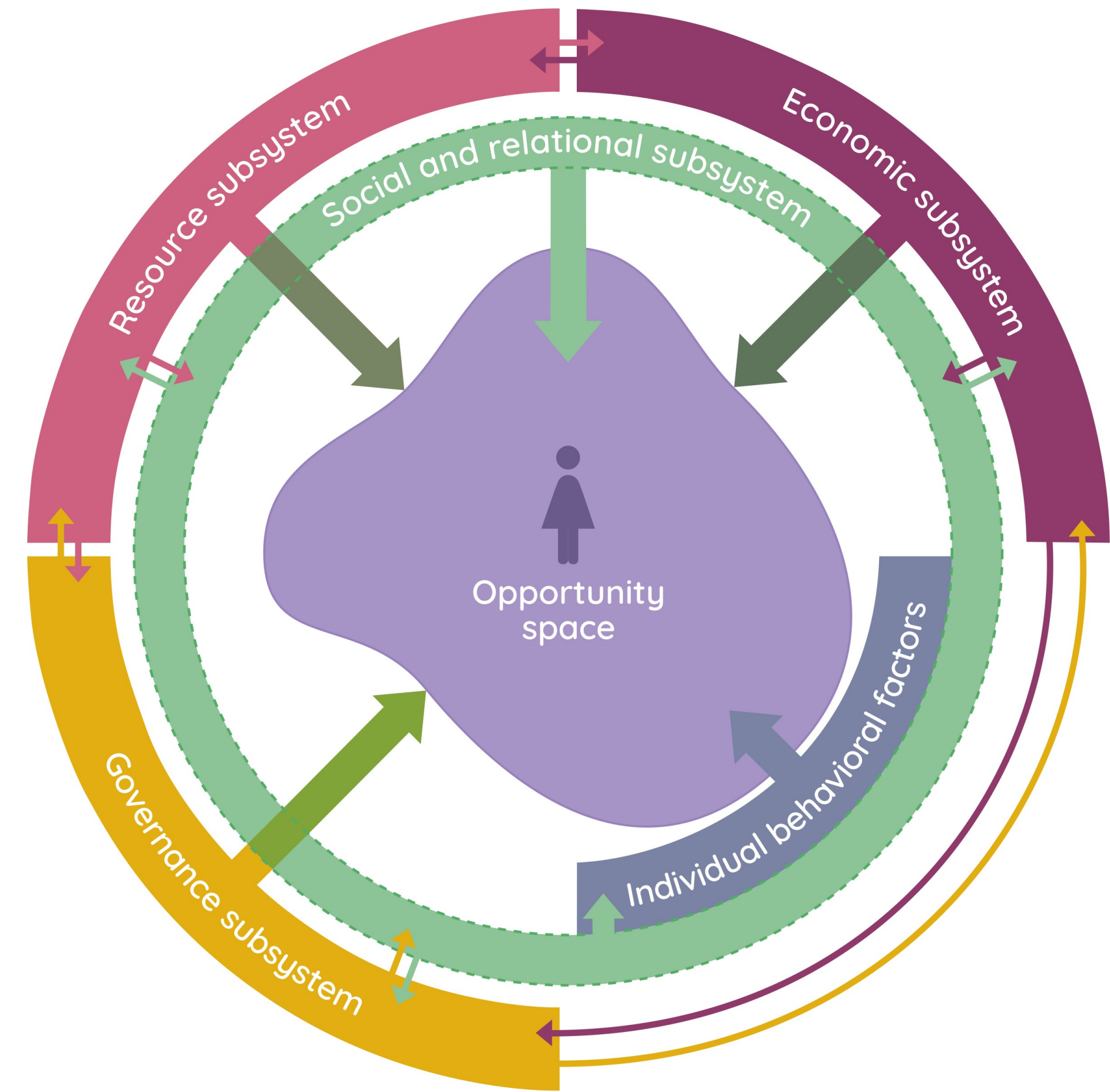
We first drew insights into determinants of behavior and agency from a range of frameworks:

social & behavior change science	=>	individual characteristics & social context
gender and youth studies	=>	agency, opportunity, resource access, and social norms
agricultural innovation systems	=>	social, economic, and institutional context
social-ecological systems	=>	actor interactions, socio-environmental context

Combining these insights, we developed a conceptual framework for agency and behavior change in agri-food systems transformation, or ACT Framework (Figure 1). The ACT Framework centers the concept of an opportunity space that reflects interactions between actors' power, agency, resource access, individual behavioral drivers, and the diverse structural factors driving behavior and agency. These include resource, economic, governance, and social and relational subsystems, the latter of which mediates actors' relationships with other structural elements.

We then applied the ACT Framework to analyze past initiatives supporting agroecological transformation in India, Kenya, Peru, Tunisia, and Zimbabwe. This process drew on an inventory of 239 initiatives and a subset of 29 case studies developed through desk research and key informant interviews. This application of the framework generated insights into how past agroecology initiatives have engaged with determinants of agency and behavior and what common challenges and gaps the ACT Framework—and the CGIAR Agroecology Initiative—can help address.

### A. Individual level



**Actors:** Includes the range of diverse actors involved anywhere in the agri-food system.

**Resource Subsystem:** Encompasses the range of biotic and abiotic resources relevant to agri-food system functions, including soil, water, ecosystem, biodiversity, and climatic conditions; human-constructed infrastructure.

**Economic Subsystem:** Encompasses the market conditions actors encounter for inputs and outputs, financial services, and overall economic development.

**Governance Subsystem:** Encompasses the entities that coordinate societal processes and actors' behaviors, including public, private, and civil sector institutions, organizations, and services as well as formal systems of rules.

**Social and Relational Subsystem:** Encompasses social norms, network structures, socially constructed identities (both individual and collective), and resulting collective attitudes, roles, and relationships. This subsystem mediates how actors engage with other subsystems and sets the conditions for actor relations, interactions, and actions. The Action Situation can re-shape the norms, networks, and identities that make up the Social and Relational Subsystem.

**Individual Behavioral Factors:** Encompasses an individual's internal resources in terms of knowledge, cognition, need-based motivations, aspirations, biases, and self-efficacy, attitudes and beliefs, etc. These factors may be influenced by external system elements.

**Opportunity Space:** Reflects the range of behavioral options available to and preferred by individuals depending on their motivations, resource access, power, and agency. Individual Opportunity Spaces are unique to each actor, shaped by Individual Behavioral Factors and the individual's connection to each of the four Subsystems on the basis of their intersectional identity.

**Action Situation:** Represents a specific set of interactions among actors which results in individual and collective behavioral outcomes. As an intermediary step, actor interactions create Collective Opportunity Space, or the joint range of behavioral options available to and preferred by the network of actors, based on the synergistic interplay of individual actors' Opportunity Spaces and the surrounding subsystems. Through feedbacks, outcomes of the actor interactions influence actors' Opportunity Spaces and the subsystems. These feedback mechanisms enable system transformation.

### B. Collective level

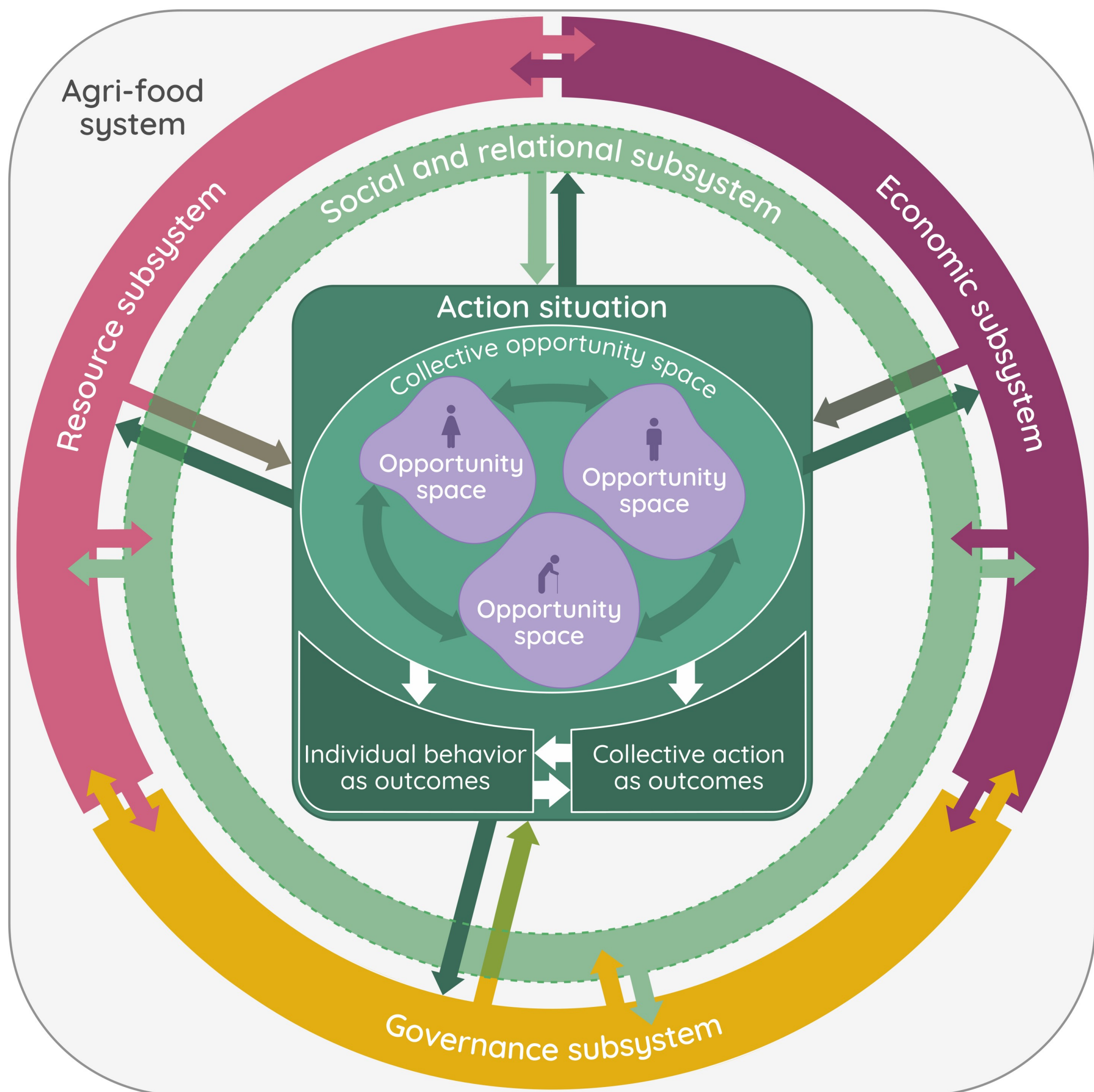


Figure 1A. Actors' unique identities, experiences, and constraints shape agency & behavioral options through opportunity spaces. B. Actor interactions are influenced by their opportunity spaces and by structural system elements, leading to individual and collective behavioral outcomes.

## Applying the ACT Framework

### Research questions:

- How did past initiatives engage with food system actors and their behaviors?
- How did initiatives engage with determinants of agency and behavior, and what was the rationale behind this engagement?

### Key findings:

- All case studies targeted producers' individual behavioral factors by increasing their knowledge. Most initiatives treated behavior as a switch to flip rather than working with diverse actors to create opportunity for behavior change.
- Structural determinants of agency and behavior, such as inadequate infrastructure, unsupportive institutional or governance systems, or barriers posed by social norms, were less often addressed. However, many of these structural elements were reported as factors enabling or impeding behavior change, indicating their relevance to initiative success.

#### A. Intervention area

#### B. Specific interventions

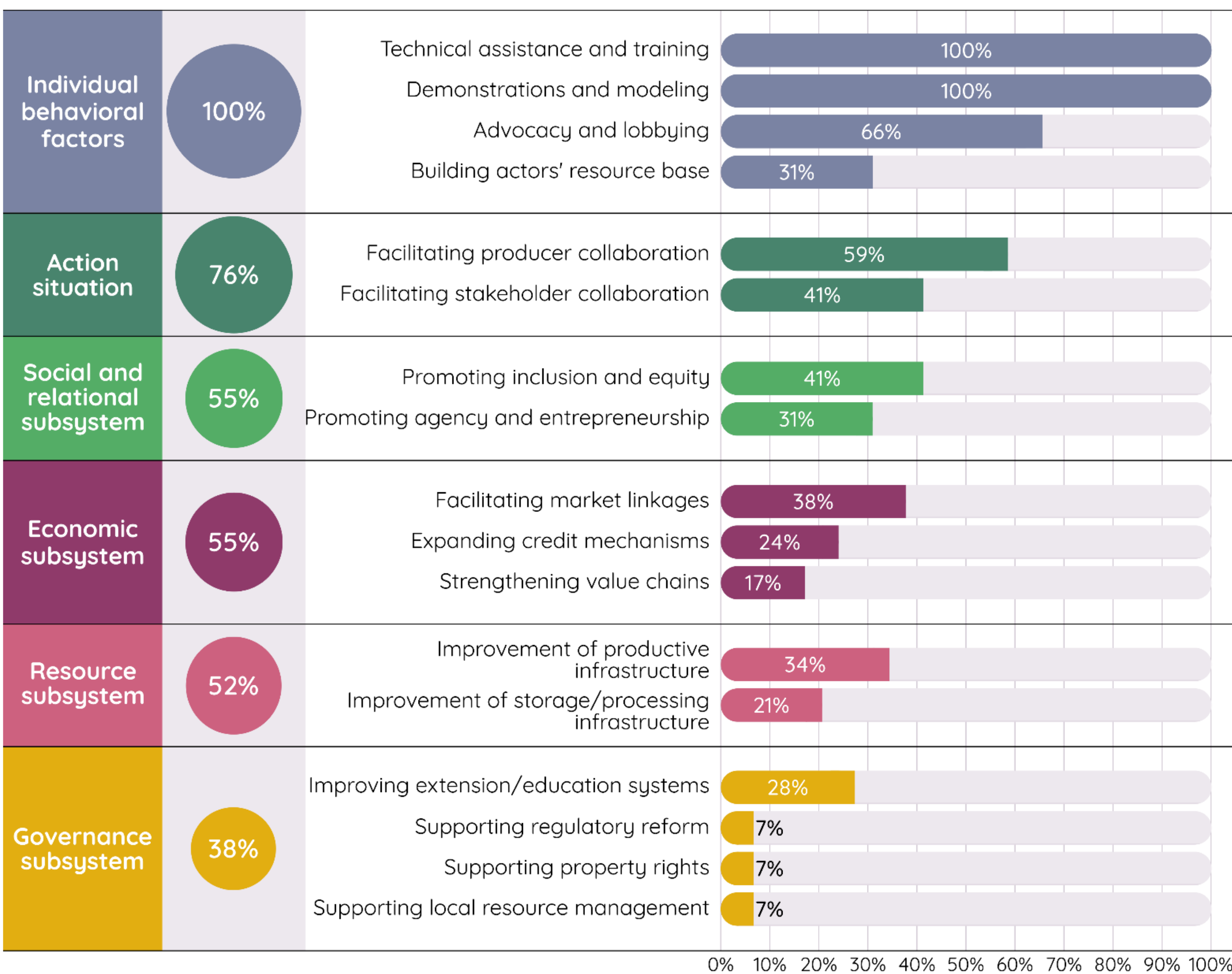


Figure 2A. Intervention areas of the conceptual framework targeted and B. specific intervention modalities employed to support behavior changes in case study initiatives.

- Initiatives' engagement with actor diversity and power varied greatly, from gender-blind to more transformative initiatives aimed at shifting social norms. Attention to social dynamics could not always resolve constraints to opportunity spaces.
- Key informants knew little about, and did not necessarily have access to, theories of change for their initiatives or information about underlying assumptions. This suggests continued reliance on top-down behavior change models grounded in unspoken assumptions.

## Conclusions

The ACT Framework enabled systematic assessment of past agroecology interventions. Together, these findings underscore a need to critically assess how agroecological initiatives are designed, structured, and funded, e.g., their duration, scope of partnerships, evaluation metrics, etc.

The Framework offers several contributions:

- An understanding of the diverse social and ecological structures that can enable or impede behavior and agency outcomes.
- Recognition of a wider set of actors that might need to be involved in agri-food system transformation processes.
- The concept of opportunity spaces, to anchor our understanding of how structural system elements and individual behavioral factors together influence behavioral outcomes.
- Recognition of the key role of social and relational systems in shaping actors' engagement with other structural subsystems, power, and agency, and through that, their unique opportunity spaces.

The ACT Framework can aid initiative designers in the clear articulation of an initiative's target actors, behaviors, and behavior and agency determinants. This approach shifts the focus from linear behavior change processes to a systems perspective, through which expanded opportunity spaces and agency may empower behavior change among diverse actors in support of a shared vision. In this regard, it may help align agri-food systems interventions with agroecological principles.



Download the report on the ACT Framework or contact [s.freed@cgiar.org](mailto:s.freed@cgiar.org) to learn more.