Annex A: More Detailed Methodology

Feeding the Future | ASPEN DIGITAL aspen institute

Survey Structure

For the Feeding the Future survey, we used Community Priority to surface insights from a distributed community of experts. The survey had three sections: a challenge ranking section, a strategy ranking section, and an optional demographics section. We had 115 respondents who finished the challenge ranking, 103 who at least partially finished the strategy ranking, and 83 who provided demographics information. The survey was open for two months from July through September 2025 and was available in English, Spanish, French, and Chinese. Data was logged after each question was answered in the survey tool, so we were able to use partially completed responses (e.g., participants who made it through the challenge section but not the strategies section or the optional demographics questions). Responses were anonymous, and participants were invited to share contact information to stay involved through a separate optional form to preserve anonymity.

We modified the survey in three ways shortly after it launched:

- First, by simplifying the challenge ranking section setup to increase participant retention;
- Second, by reducing the number of questions in the strategy ranking section from 16 to 10; and
- Third, by moving the regional demographic question to the beginning in order to minimize participants without region information.

Region Clusters

As part of the survey, participants were asked to indicate the region where their work on food systems was primarily focused. To analyze the results, we used the United Nations Statistical Division Geographical Regions, grouping responses into 22 regions and then clustering them based on Human Development Index (HDI) values. Because these regions contain multiple countries with different HDI levels, we averaged the HDI value of the constituent countries to produce a regional HDI score and then grouped similar regions into three roughly similar-sized clusters:

1. Less Developed Regions (HDI ≤ 0.70): Western Africa, Eastern Africa, Middle Africa, Melanesia, Southern Asia, Southern Africa, Micronesia, & North Africa (average HDI: 0.60)

2. More Developed Regions (0.7 < HDI < 0.8): Polynesia, Eastern Asia, Central America, South-eastern Asia, Central Asia, Caribbean, South America, & Western Asia (average HDI: 0.76)

3. Most Developed Regions (HDI ≥ 0.80): Western Europe, Eastern Europe, Southern Europe, Northern Europe, Northern America, & Australia and New Zealand (average HDI: 0.88)

While these thresholds were defined arbitrarily for the sake of comparability, they were grounded in the idea that food security challenges and strategic priorities tend to vary according to a region's level of development. We recognize that this is an imperfect classification—geographies are diverse, and local contexts shape food systems in complex ways—but it provided a useful lens to identify patterns and differentiate needs across a global context.

Twenty four participants' work is focused in Less Developed Regions, 32 in More Developed Regions, 42 in Most Developed Regions, and 40 had No Region Selected. Participants could select more than one region in the demographics section, reflecting the reality that some professionals work in multiple regions. Responses from some participants whose work spans multiple of our defined clusters were double-counted (12

participants) or triple-counted (five participants) as a result. An additional impetus for designing these clusters was to mitigate bias in our sample towards North American respondents.

Challenge Ranking

For the challenge ranking section, participants were asked to rank six challenges in food security in order of importance. The challenges themselves came out of a series of workshops with food security experts and landscape research done by Aspen Digital.

For each region cluster, we calculated a challenge score for each challenge c using

$$c = \sum_{i=1}^{n} \frac{1}{w}$$

where w is an integer rank from one to six and n is the number of participants for that region cluster. This $\frac{1}{w}$ weighting gives more emphasis to the top three choices without fully disregarding the bottom three choices. We then sorted the six challenges for each region cluster by total score (see Table 1 in the main report).

Strategy Ranking

For the strategy ranking section, participants were asked to select the most useful strategy to solve a particular challenge. They were asked five questions for their top ranked challenge from the challenge section and five questions for a randomly selected challenge. A set of four strategies were presented out of a set of 53 possibilities (for full list see Annex C: Ranked Strategy List), where a weighted random selection was used to help surface strategies that had not been shown to many participants. In this way, we made sure that every possible strategy was shown across every possible challenge. We removed five participants' responses from this section for data quality reasons. They completed it extremely quickly leading us to believe their responses were not well-considered.

For each region cluster (Less Developed Regions, More Developed Regions, Most Developed Regions, No Regions Selected), we calculated the following scores for the 53 possible strategies across all six challenges (for a full ranked list, see Annex C: Ranked Strategy List).

We defined $s_{j,k,r}$ as the score for strategy *j* for challenge *k* within regional cluster *r*, where *j* is an integer from one to 53, *k* is an integer from one to six, and *r* is an integer from one to four.

$$s_{j,k,r} = c_{k,r} \cdot \frac{number\ of\ total\ votes\ for\ strategy\ j\ for\ challenge\ k\ in\ region\ r}{number\ of\ total\ times\ strategy\ j\ was\ shown\ as\ an\ option\ for\ challenge\ k\ in\ region\ r}$$

The score $s_{j,k,r}$ is calculated using $c_{k,r}$ in order to weight strategies for participants' prioritized challenges more strongly, capturing the diverging preferences of each of the regional clusters (e.g., the strategy scores of a cluster with a strong preference for Institutional Capacity and Governance over Access and Distribution would be more weighted towards the former).

Each participant received one "vote" per challenge, distributed evenly across all strategies they chose. A participant who answered five strategy questions for a given challenge would get a $\frac{1}{5}$ "vote" for each strategy they selected. We did this to ensure that participants who took the survey after we made changes to the number of strategies presented would not be under-weighted. We also weighted votes so as not to over-emphasize singleton votes for infrequently shown strategies for a given challenge (so that a strategy shown six times and chosen six times would be weighted more heavily than one shown only once and chosen once, even though they were both chosen the same percentage of the time).

We use Food and Agriculture Organization of the UN data for the three year average from 2022-2024 for each of the UN Statistical Division geographical regions to calculate the number of moderate to severely food insecure people in each of our region clusters. Less Developed Regions had around 1676.8 million people, More Developed Regions had around 512 million people, and Most Developed Regions had around 99 million people.

Assuming the participants in the No Regions Selected cluster are distributed in the same way as those in our Less, More, and Most clusters, we estimated their number of food insecure people as 206.75 million people using

$$f_{no\ region} = \frac{p_{less}f_{less} + p_{more}f_{more} + p_{most}f_{most}}{3}$$

where p is the percentage of respondents serving that region in our survey and f is the number of food insecure people in millions from that region. Our final regional weights *R* were *R* = [16.13, 6.57, 1.67, 3.32] for Less Developed Regions, More Developed Regions, Most Developed Regions, and No Regions Selected, respectively.

To find cross-cutting strategies, meaning strategies with relatively high scores across all six challenges, we calculated our final scores S_j for each strategy *j* across all challenges and regional clusters:

$$S_j = \sum_{r=1}^{4} \sum_{k=1}^{6} R_r \cdot s_{j,k,r}$$

We took a sum of the scores $s_{j,k,r}$ to get a score representing how each strategy *j* fared across all *k* challenges for each regional cluster *r*. We then weighted the result using regional weights *R,* based on an estimate of the

number of food insecure people living in each of our four regional clusters. This was to mitigate some of our sampling bias and to help us focus on areas where interventions can have the greatest impact. Ties were broken by preferencing strategies that were shown more times.

For calculating challenge-specific strategy rankings that we use in the Challenge Spotlights, we did not look at cross-cutting strategies, so we skipped the first collapsing sum, and weighted the $s_{j,k,r}$ scores directly instead (e.g., $s_{j,1,r}$ would be used for the Production and Resource Management strategy rankings).