

# ***Multi-dimensional Scaling***

***Multivariate Solutions***

# ***Multidimensional scaling (MDS)***

- Multidimensional scaling (MDS) graphically displays the proximity of brand attributes or attitudes.
- Survey Design
  - Potential customers are asked to compare pairs of products, rate them, or make judgments about their similarity.
  - The maps are calculated using various distance measurements.
- An MDS Map can help determine:
  - What products and services do customers tend to purchase together.
  - Which brands do they tend to lump into the same category.
  - Which attributes' importance or performance tend to be connected.

# ***Multidimensional scaling (MDS)***

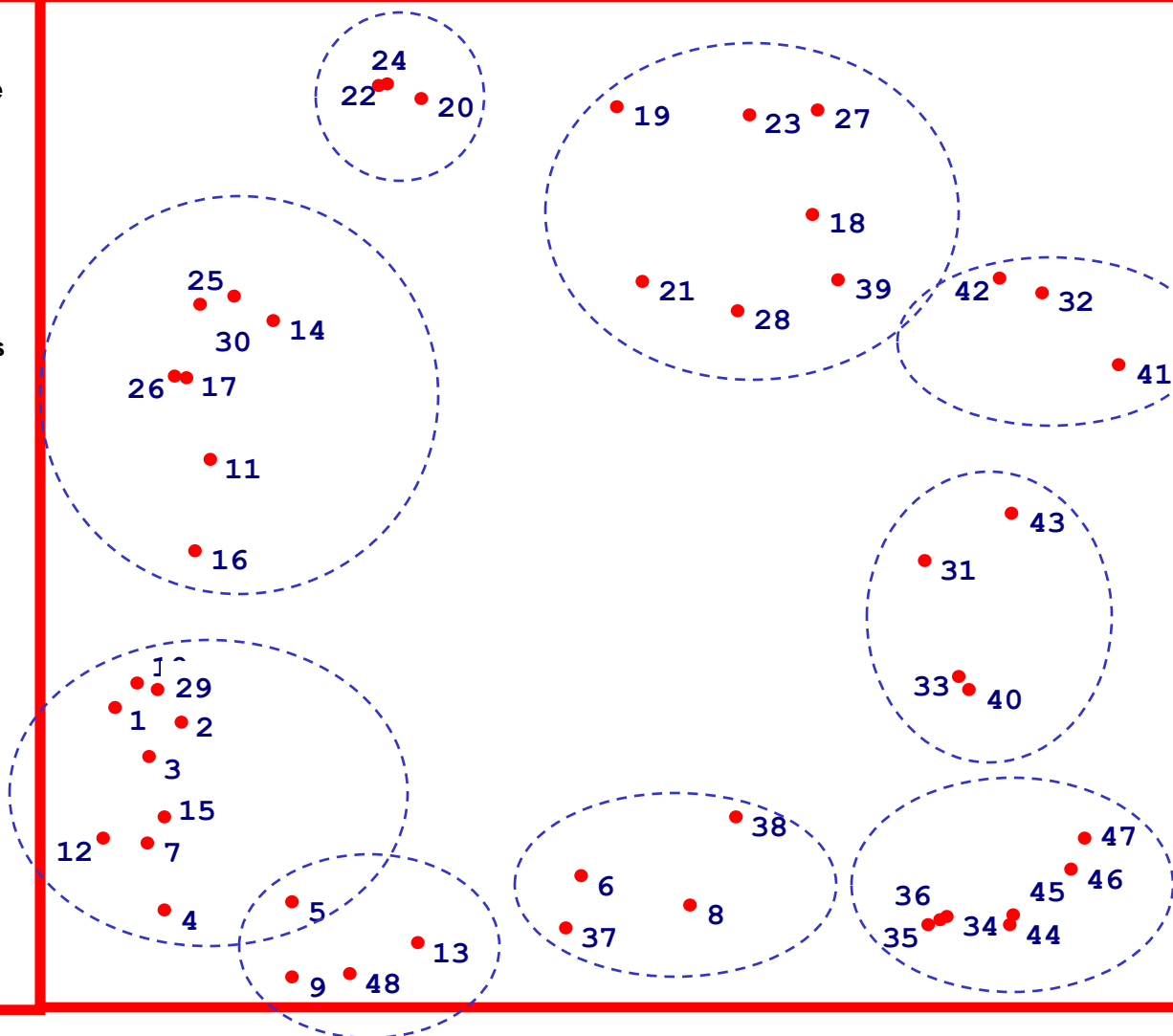
- **Structure of the Questionnaire**
  - **Ratings for Single Brand**
    - Can be discrete scale (e.g. 1-to-7)
    - Check all that apply (percentages)
  - **Virtual Shopping**
    - Please check all items that you intend to purchase
  - **Input data can be:**
    - Ratings
    - Brand similarities
    - Groupings of various brands or types of products
    - Observation of which products potential customers tend to purchase together in a virtual store or mystery shopping scenario

# Multidimensional Scaling Maps

## Virtual Online Supermarket

### Attributes

- 1 White Bread
- 2 Pumpernickel & Rye
- 3 Whole Wheat & Multigrain
- 4 Sourdough
- 5 Fruit & Specialty
- 6 Baguettes
- 7 Rolls
- 8 Bagels & Croissants
- 9 Artichokes
- 10 Asparagus
- 11 Avocados
- 12 Beans & Peas
- 13 Broccoli & Cauliflower
- 14 Cabbage
- 15 Carrots
- 16 Celery
- 17 Corn
- 18 Cucumbers
- 19 Eggplant
- 20 Fresh Herbs
- 21 Leafy Greens
- 22 Lettuce
- 23 Mushrooms
- 24 Onions & Garlic

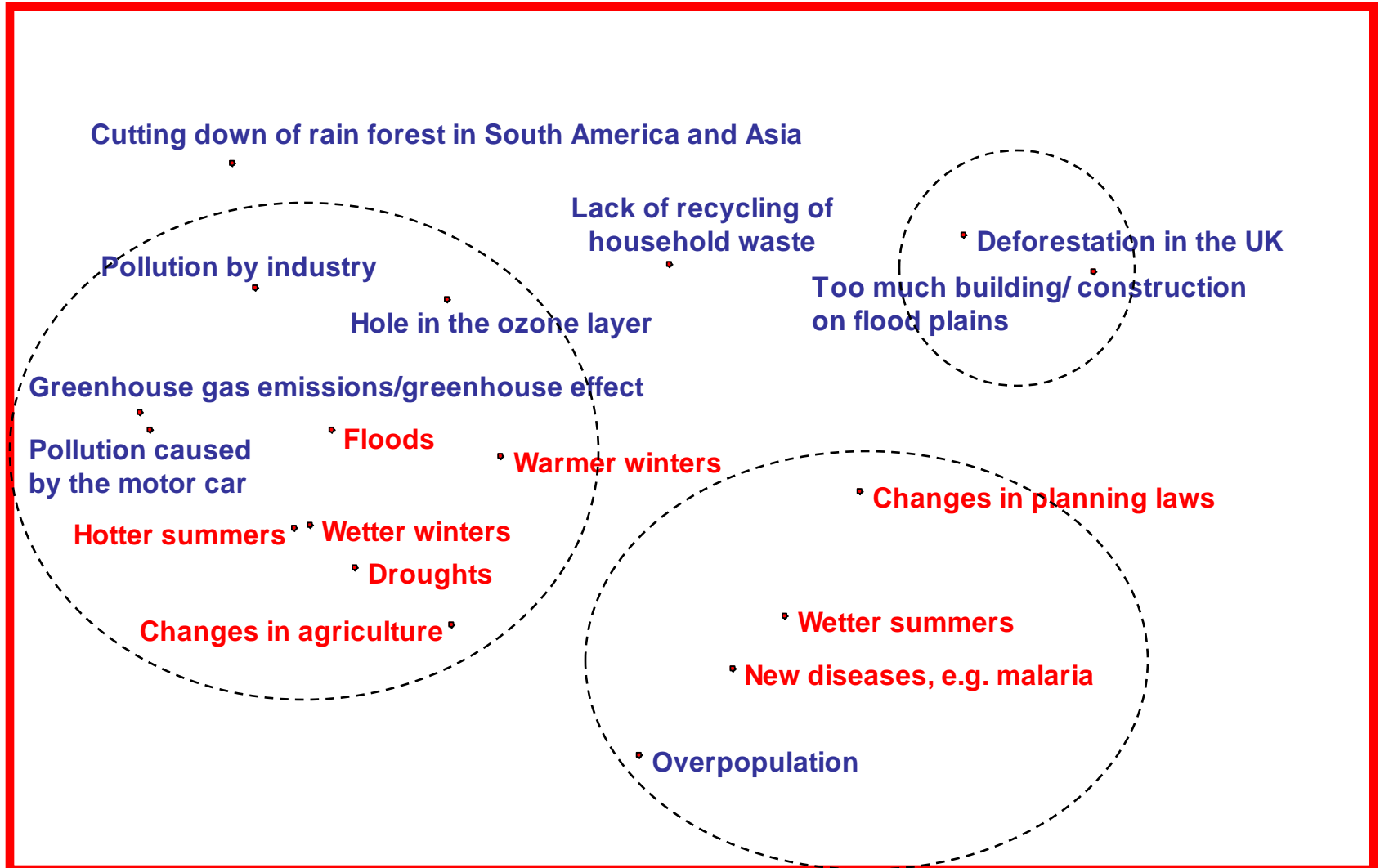


### Attributes

- 25 Peppers
- 26 Potatoes
- 27 Root Vegetables
- 28 Specialty Vegetables
- 29 Sprouts
- 30 Squash & Zucchini
- 31 Tomatoes
- 32 Fish Fillets
- 33 Salmon
- 34 Shrimp
- 35 Lobster
- 36 Crab
- 37 Scallops
- 38 Clams, Mussels, & Oysters
- 39 Chicken
- 40 Beef
- 41 Veal
- 42 Lamb
- 43 Pork
- 44 Ground
- 45 Cubes & Strips
- 46 Turkey
- 47 Duck & Game Birds
- 48 Sausage

# Multidimensional Scaling

## Main Causes/Main Effects of Weather Changes



Blue Labels=Main Causes of Climate Change

Red Labels=Main Affects of Climate Changes