Possible package designs/transport:

Train (land transport) - pros; relatively quick, can carry a lot of supplies. Cons; depending on where the disaster is, there may not be railroad, and if there is, they could have been destroyed.
Boat (water transport) - can be cheaper than air transport/drop but is also way slower and can be difficult for supplies to reach those in need of them.
Plane (air transport) - pros; generally quick, cons; commonly expensive (differs to size of package)

Possible materials:

- Wooden crates w/parachutes
- Small capsule
- Bags (example: ziploc/plastic or duffle bags)
- Cardboard box
- Plastic tubs

Design one: Wooden (cardboard) crate

Pros:
- Quicker than shipping
- Easiest packaging
- Can use planes, airplanes, or other air mobiles.

Cons:
- Unpredictable landing
- Very heavy and compact
- Price can go into hundreds of thousands very easily based on materials.

Materials:

1. Wood, steel, and bolts (for in-class prototype, cardboard and hot glue/tape)

2. glider/parachute (plastic bags or sheets)

The wooden crate which will be filled comfortably with items would be transported by air, dropping the crate (which will be called The Saving Dog House) that has a parachute or a type of glider to make the crates landing softer along with lights for visibility.

Design two:Plastic boxes and garbage bags

Pros:

- Easy to transport/carry
- Visible remaining supplies
- Easy to get, likely have at home

Cons:

- Flammable and compact
- Easily ripped or snapped
- Not sustainable for the planet

Materials:

1. Ziploc bags
2. Plastic boxes like food containers, storage units, and crates

Plastic containers/bags are easy to transport (on land, sea, and air) because of size but are limited to what they can hold and can't withstand many challenges in a natural disaster.

Design three:Metal shipping container

Pros:

- Can store a lot of supplies
- Can be used as shelter
- Very sustainable

Cons:

- Large
- Expensive
- Slow delivery

Materials:

1. Container (in-class prototype can be of plastic)
2. Plastic boxes like food containers, storage units, and crates

While the container itself is more expensive, getting it to the affected area would be 4-5 times cheaper than an airdrop. These large containers would be packed full of smaller boxes, and imported via truck, ship, or train.

Design four:Sphere/capsule shape container

Pros:

- 1. Many different ways of delivery
- 2. Can be used as shelter
- 3. Could be made of many different materials

Cons:

- 1. Would have to be specially made
- 2. Odd shape
- 3. May not fit as much supplies

Materials:

1. Plastic water Jug
2. Hinges
3. Tape

Wooden Cube/Crate

The crate would be made of wooden planks and would be lined outside with a half inch of steel and be eight feet by eight feet by eight feet. The steel-lined wooden crate would hold 85 lbs and would contain canned food, non-refrigerated medicine, blankets/sleeping bags, water bottles and filters, portable heaters, a type of currency, a portable stove, household tools and clothes for all ages.

Once the crate has been landed, the crate can fold into a house-like shelter (shown to the bottom right). The crate, now a house-shaped shelter,

would cover people from the elements listed to the bottom left.

The crate would be able to withstand the conditions of fire, wind, rain, snow, and other harsh elements.