The types identified and modelled in the domain are the following:

* A **“Country”** type which represents the main entities interacting in the domain.

The predicates identified and modelled in the domain are as follows:

* **(is-not-resources-biased ?c - Country)** – determines the bias of a country towards trading resources. If a country is biased towards resources, it will not buy resources from another country, yet it will gladly sell resources to another country. The predicate has been negated to avoid negative preconditions.
* **(is-not-industry-biased ?c - Country)** – same as the previous predicate, but geared towards industry instead of resources.
* **(is-not-services-biased ?c - Country)**  – same as the previous predicate, but geared towards services instead of industry.
* **(is-not-growing-economy ?c - Country)** – this predicate is used to ensure that a **Country** cannot grow its economy twice at the same time. It has been negated to avoid negative preconditions.
* **(is-not-growing-quality-of-life ?c - Country)** – this predicate ensures that a **Country** cannot grow its quality of life twice at the same time. It has been negated to avoid negative preconditions.

The functions identified and defined in the domain can be split into two different categories: variables and constants, variables can change over the course of the plan making process:

* **Variables**:
  + **(resources-sector ?c - Country)**
  + **(industry-sector ?c - Country)**
  + **(services-sector ?c - Country)** – this functions model the current standing of the economy of a certain country in terms of sectors, one function for each economic sector.
  + **(funds ?c - Country)** – this function represents the current ‘balance’ of a country
  + **(quality-of-life-index ?c - Country)** – used to represent the current quality-of-life-index value of the **Country**
* **Constants:**
  + **(resources-price ?c - Country)**
  + **(industry-price ?c - Country)**
  + **(services-price ?c - Country)** – this functions determine the price at which the country will sell its resources/industry/services points for to other countries
  + **(economy-growth-price ?c - Country)** – this function has the role of determining how much the country has to spend in order to generate new economy points
  + **(resources-growth ?c - Country)**
  + **(industry-growth ?c - Country)**
  + **(services-growth ?c - Country)** – functions used to specify how many economy points a country receives for each growth cycle
  + **(quality-index-resources-cost ?c - Country)**
  + **(quality-index-industry-cost ?c - Country)**
  + **(quality-index-services-cost ?c - Country))** – This functions determine how many economy points a country has to spend in order to gain a quality-of-life-index point over one development cycle

The durative actions identified and modelled in the domain:

* **trade-resources –** This action models an interaction between two countries where the first country buys resources from the second country. For the action to go through, the first country needs to not be biased towards buying resources and it should have enough funds to purchase 50 resource points at the price set by the second country. The second country should have at least 50 resource points. At the start of the trade, both countries will loose access to their funds and resource points respectively. The points and funds will be awarded back at the end of the action.
* **trade-industry –** Same as the previous action both with industry points instead of resource points.
* **trade-services –** Same as the previous action both with services points instead of industry points.
* **grow-economy –** This action represents a development cycle for the economy of a country. The country spends funds to gain economy points in each sector. It is not possible to grow your economy twice at the same time.
* **grow-quality-of-life –** This action models a development cycle for increasing the quality of life in a country. The country spends a certain number of each type of economy points to gain 1 point on the quality-of-life-index. It is not possible to grow the quality of life in a country twice at the same time.