

## CVEN 489/689

### “SUSTAINABLE SYSTEMS IN CIVIL ENGINEERING”

#### **Exercise 3: Ethics, Sustainable Development, and the Construction of Infrastructure for Settlements of Displaced Persons**

The point of this exercise is to practice use of the ethical process in considering action under apparently dilemmatic human and ecological circumstances. The specific problem that you will consider is how best to provide civil infrastructure to populations of displaced persons (i.e., refugees from natural disasters, political strife, etc.). Each of the three groups will consider a specific case study.

The question of building civil infrastructure for displaced persons often becomes difficult when these displaced groups physically relocate to areas of ecological sensitivity or insufficient natural capital. The question can become a dilemma if a perceived choice arises between concerns for the human well-being of the refugee group and the ecological well-being of the newly settled landscape. Many factors can exacerbate the dilemma including: uncertainty over the time-length of displacement, harm to native human populations in the new location, unfamiliarity of the displaced population with the ecology of their new location, and weakened physical health and social institutions among the displaced group, among others.

*Your tasks:*

You will divide into six groups. The case study assignments are as follows:

- Groups 1 & 2: The displacement of Hutu refugees from the country of Burundi to camps in Tanzania, 1990's to present (with some similar episodes happening earlier).
- Groups 2 & 3: The displacement of Palestinian refugees from the West Bank to Jordan, 1967 to present.
- Group 4: The forced settlement of American Indians on reservations in the United States, 1840's to present (or 1638 to present, according to some sources).
- Groups 5 & 6: The displacement of Azeri refugees from Armenia to Azerbaijan, 1993 to present
- Use the web to research the history of these cases. What was the root cause of the displacement? How quickly did people move? What were the ecological conditions of their new location when they arrived? What human institutions, technology, and knowledge did they bring with them? What are the future prospects for return to their original location?
- Discuss with your group members: what are the important needs for civil infrastructure to support the displaced population in its new location? What are the consequences of not having each form of infrastructure present? Prioritize categories of infrastructure.
- Discuss with your group members: what are the effects of the newly arrived population on the ecological landscape of the new location? What are the expected time-lengths and severity of these effects?

- Using your understanding of the “Ethics of Sustainable Development,” determine what are the most important moral and ethical questions resulting from this situation. What guidance can be had from codes of professional ethics that we have studied and that you may know of?
- Assume that your group is now an ethical advisory panel for both the U.N. High Commissioner for Refugees and the U.N. Environment Program. Develop a code of ethics to guide policy makers and technical professionals in determining how civil infrastructure should be built (or not built) to support displaced populations.