

desertification has tragic consequences, particularly in Africa.

In this project, Burkina Faso was selected from the Sahel region as a country that meets the following conditions:

- 1) A country seriously affected by desertification
- 2) A country with relatively large areas with aquifers of shallow groundwater
- 3) A country whose political situation is stable

(2) Survey to select the project site, from 1995 to 1996

The interpretation of satellite images and aero-photographs, as well as preliminary exploration, was carried out at 35 sites in the central and the northern part of Burkina Faso, which are areas affected by desertification, to narrow the possible sites for the project. On the basis of the results of electric soundings, test drillings, observations of groundwater level and socio-economic research, Nare Village, Tougouri District, Nametenga Province was finally selected for the project site of the subsurface dam.

(3) Construction of facilities for the demonstration study of a subsurface dam, from 1997 to 1998

Construction of the subsurface dam was carried out during the dry season from November 1997 to June 1998, on the Kolongo River in Nare Village.

Thereafter, during the dry season after October 1998, water-pumping and supply facilities, a small-scale surface dam with water gates, wells for groundwater observation, a pilot farm and other facilities were set up.

(4) Conduct of relevant demonstration studies, from 1999 to 2000

Along with the observation of the water storage state, the following studies were carried out to examine effective groundwater usage and its impact on the environment (in particular, on vegetation):

- Observation of groundwater
- Meteorological observation (mainly of rainfall)
- Observation of rate of streamflow
- Agricultural pilot studies
- Vegetation research

(5) Additional observations, from 2001 to March 2003

In the initial plan, the duration of this project was 6 years (1995 to 2000). However, as the rising speed of groundwater level was lower than expected, it was necessary to continue the observation to verify the effectiveness of the subsurface dam. The project was thus prolonged for 2 years, and the observation of groundwater and rainfall was continued.

(6) Completion of the project

The project was finished in March 2003 with positive results. The Permanent Secretariat of the National Council for the Environment and Sustainable Development (S.P.CONEDD) of Burkina Faso requested that the facilities for the demonstration studies be left to improve and develop the living conditions of the local people. This request was accepted with the hope that these facilities will continue to contribute to combating desertification and to the sustainable development of Nare Village and the whole of Burkina Faso.

1-3 Organizational framework of the project

This model project to combat desertification was carried out under the organizational framework shown in Fig. 1.1.

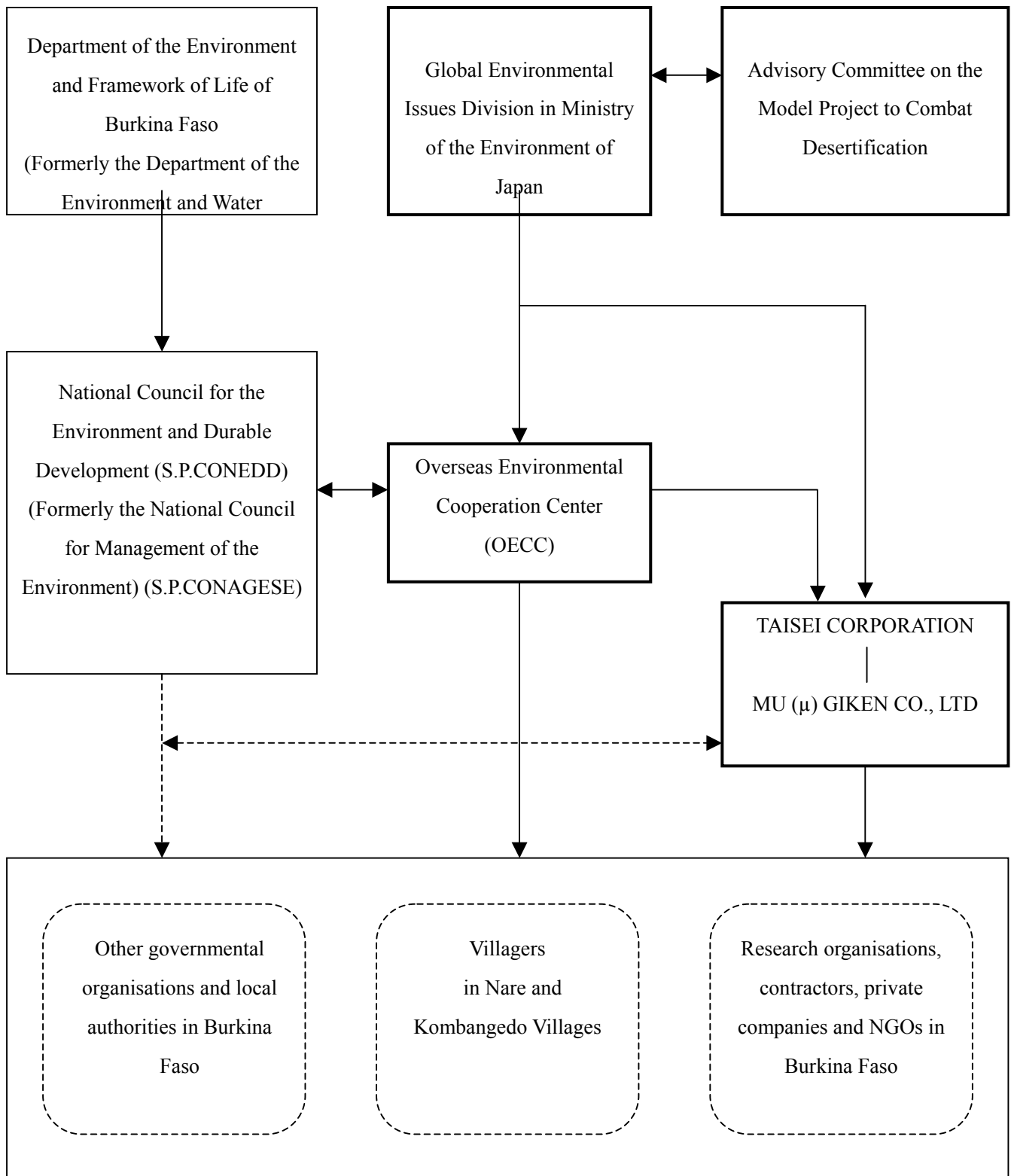


Fig. 1.1: Organizational framework of the project