The research took place between 2003-2007 and was determined by the appearance of some abnormal dried forestry plantations during the former period in the 12 dammed areas of the Danube Delta (total area of 5837 hectares).

The dammed areas of the Danube Delta were arranged and planted about 40 years ago. Only 10-15 years later, it was noted a decline in these plantations and the first signs of drying were observed.

During the period of study for this research, the dried plantations surfaced about 13.5% to 75%. In order to find out the causes of these dryings, it was taken into account the quality of the soil located in these areas and the subsurface water level.

Most of these dryings were noted on sandy soils, low in nutritious substances and also on clay soils located on the bottom of old lakes, usually undeveloped soils that now contain undecomposed organic substance; these bottom of old lakes split up in cracks as deep as 1.5-2 meters during the dry season increasing the evaporation loss.

Looking at the subsurface water level, the plantations situated on top of bank ridges dried off because the water level never raises higher than 6-7 meters even when the Danube floods; moreover, dried woods were observed on the bottom of old lakes were the water level oscillates between flooded ponds during the springtime and underground water level under 4 meters deep during the dry seasons.

The variation of subsurface water level followed in general the Danube’s water heights, recording high level in springtime and low level during September-October. The abundant rainfall levels recorded during certain years in the summertime (over then 100 liters / square meter) did not influence the downward trend of subsurface water level. Moreover, not even the Danube’s high levels during the summer stopped the decrease of subsurface water level.

Beside these objective causes, which refer to stational conditions, there are other causes, which had contributed and aggravated the drying of forestry plantations:

- The delay of thinning procedures;
- Some sanitary works were delayed from the moment when some fungus disease appeared;
- The repeated vermin attacks;
- The keeping of some trees, which became dried over the exploitation point favoring the young trees’ infest;
- The practice of exaggerative grazing with horses, cattles, goats, and sheep.

During the first years, in order to establish the technologies for ecological reconstruction (reforestation) there were determined a few experimental areas using a diversity of species of trees planted in different diagrams (distances) between them.

At the end of the first research cycle there were established technologies of reforestation for each of the six types of forest stations identified inside the dammed areas in the Danube Delta.

At this stage, the research is in progress in order to improve the technologies proposed. In conclusion, up to date the effect of damming the areas in the Danube Delta are negative; the reforestation process must be developed, activity, which needs the political evolvement of the Romanian government.