

to the total environment—land, air, and water—rather than as it may affect just one of these resources.

With the ever-increasing demand for water in California the size and complexity of our water developments have steadily increased. The reuse of water has become commonplace, and quality has emerged as an element as important as quantity.

Now, after we have been developing these western water supplies for 110 years, in our State, the problem of gradual deterioration of the quality of water through reuse is becoming critical. Downstream users are in controversy with upstream users in many river basins of the irrigated west. In the future many more streams will be affected.

Your committee should be commended for getting the quality problem out where it can be studied and considered now, rather than waiting until it has grown to such proportion that it will be possible of resolution only by extended litigation.

Major efforts are being made in California to evaluate the significance of the following water-quality-related factors which influence the usability of our water resources: first, drainage wastes; second, nutrients; third, pesticides; fourth, detergents; fifth, waste reclamation; sixth, desalination brines; and seventh, solid wastes.

The amount of salt which accumulates in root-zone soils must be maintained at a fairly low level or crop growth can be inhibited. Experience gained throughout the world has shown that irrigated lands in arid and semiarid regions of the world deteriorate unless adequate drainage is available.

For the committee's information, as a basic point, our California agriculture is about 95 percent irrigated agriculture. At least the values of the crops from irrigated lands run about 95 percent of the total. We have about 8½ million acres irrigated in the State and California has a gross crop value plus livestock value of about \$3,600 million a year. We are the leading producer among the 50 States. The problem then of the care of the soils under irrigation is particularly important to California, and it is also growing acute.

When the mineral content of drainage waters rises to levels that make it no longer suitable for reuse, even though the water may not be contaminated so far as health is concerned, it must be returned as directly as possible to the sea. Otherwise, it can poison the land with its accumulated salts. Evidence of the progressive deterioration of water caused by continual reuse may first appear in critical degree in a single area downstream, but the problem and its solution are not restricted to that immediate area and may be basinwide or even inter-basin from the first.

The accumulation of salts in the soil profile, as well as the development of high water table conditions, has made it impracticable to farm extensive portions of the Indus River Valley in India and Pakistan as well as about 25 percent of the Delta of the Nile.

Mr. VIVIAN. Mr. Chairman?

Mr. DADDARIO. Yes.

Mr. VIVIAN. Are you suggesting that these areas are recoverable?

Mr. WARNE. Yes.

Mr. VIVIAN. In other words, wouldn't it be possible to increase the agricultural output of those nations by desalinating the soil?