Basil Hetzel reflects on his pioneering IDD studies in Papua New Guinea

In the recently published Global Iodine Scorecard, Papua New Guinea joined the growing number of countries that achieved optimal iodine nutrition at the national level. As we are nearing the target of virtual IDD elimination, PNG’s achievement seems particularly poignant. It was 50 years ago in the highland villages of Papua New Guinea that a team of researchers, which included Dr. Basil Hetzel, found evidence that endemic cretinism (a condition of severe mental impairment) could be prevented by correcting iodine deficiency before pregnancy. Hetzel recalls: “Papua New Guinea had the mountains and high rainfall, which provided a suitable environment for severe iodine deficiency from the soil. Our work had proved the brain involvement in iodine deficiency”. Previous research had found links between iodine deficiency and goiter, but as Hetzel explains, “cretinism was not fully understood until the trial in Papua New Guinea.”

With subsequent research, and through Hetzel’s tireless efforts, a sufficient evidence base was established to develop a global program to prevent what was now recognized as a broad spectrum of effects of iodine deficiency in a population, jointly termed iodine deficiency disorders (IDD).

In 2012, more than 40 years since Hetzel’s work in Papua New Guinea, successive Global Iodine Scorecards have shown remarkable and steady progress at the global level (Figure 1). From 54 iodine deficient countries in 2003, the number has more than halved in the past decade. Through securing political commitment, involving the private sector and persistent advocacy, we’ve expanded USI over the past two decades.

When asked whether he ever imagined we would get so close to virtual elimination of IDD in his lifetime, Hetzel says he has been hopeful, and it is very gratifying to see the evidence of progress around the world. But even though the recent success of Papua New Guinea may seem symbolic, Hetzel agrees that it’s too early to rest on our laurels. In many countries, the last-mile efforts are the hardest. “It’s important to maintain the momentum” he says.

**Figure 1** Global progress against iodine deficiency between 1993 and 2015

![Map of the world showing iodine deficiency levels in 1993 and 2015](image)

- **Severe deficiency**
- **Moderate deficiency**
- **Mild deficiency**
- **Adequate status**
- **Excess**
- **No data**

Papua New Guinea