The development of a strain of grass pea that is safer to eat in the large quantities consumed by some poorer populations in Africa highlights the point that "research for the long-term relief of hunger in Africa must contemporaneously address issues of toxicology as well as those of plant science and nutrition." The recently released plan from the National Marine Fisheries Service for saving endangered salmon of the Columbia River is discussed by several of those involved with the issue. And an international collaboration to establish thyroid tumor tissue banks in the three states most directly affected by the Chernobyl nuclear accident is described.

Aiding African Agriculture

As Conway and Sechler state in their Editorial "Helping Africa feed itself" (*Science*'s Compass, 8 Sept., p. 1685), "Now is the time for the Western scientific community to apply its knowledge, in genuine partnerships with African scientists, to help Africa escape the tyranny of hunger." One such partnership began in the 1980s with the creation of a worldwide consortium of scientists focused on development of a safe strain of the grass pea (*Lathyrus sativus*). This is an environmentally tolerant plant with a high protein content that is cultivated by poor farmers without tillage or inputs in the Greater Horn of Africa (*1*) where famine has been a recurrent phenomenon, a topic discussed by Broad and Agrawala in the same issue in their Policy Forum, "The Ethiopia food crisis—uses and limits of climate forecasts" (p. 1693). These efforts culminated in the development of grass pea strains with low concentrations of a neurotoxic excitant amino acid (β-*N*-oxalylamino-L-alanine) that can cause a crippling disease (lathyrism) in poor communities where grass pea is heavily consumed (*2, 3*).

Studies conducted by African scientists of various disciplines, working with Western colleagues, played a key role in the grass pea research effort. This model of international and cross-disciplinary collaboration should now be applied to cassava (*Manihot esculenta*), a drought-resistant root crop that feeds at least 200 million people in sub-Saharan Africa. This, too, is an indispensable and environmentally tolerant food plant for Africa and elsewhere, but the tuber is protein-poor and contains cyanogenic glucosides that yield significant concentrations of cyanide in the consumer (*4*). Although the effects of this diet on development are not understood, dietary dependence on cassava may result in an irreversible spastic paraparesis in children and adults that is clinically comparable to lathyrism (*2*). In sum, therefore, research for the long-term relief of hunger in Africa must contemporaneously address issues of toxicology as well as those of plant science and nutrition.

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Many Plans, One Bottom Line: Save Endangered Salmon

The News Focus article "Can science rescue salmon?" by Charles C. Mann and Mark L. Plummer (4 Aug., p. 716) is an admirable attempt to condense one of the nation's most complicated resource management debates into a concise, readable article. However, in its brevity the article is potentially misleading regarding several critical points.

The authors give the impression that the National Marine Fisheries Service (NMFS) simply preferred the analysis performed by its own scientists over that of the general scientific community ("the fisheries agency listened to its own scientists"). In conducting the Cumulative Risk Initiative (CRI) analysis, NMFS scientists adopted a different approach than that used by the Plan for Analyzing and Testing Hypotheses (PATH) for a number of reasons.

First, CRI scientists (as well as independent reviewers) were troubled by the overly optimistic results of PATH analyses. For example, PATH showed that every management option considered, including no action (that is, continuing current hydropower operations), achieves the 100-year survival standard used by PATH: no populations would go extinct. Second, whereas PATH focused on two evolutionary significant units (ESUs) in the Snake River, the CRI examined 11 ESUs across the entire Columbia Basin. By comparing the status of salmonid populations in the entire Columbia Basin, the CRI sets the stage for establishing conservation priorities. Third, the CRI is analyzing the feasibility of reversing salmon decline through a broad range of actions, which were only cursorily discussed by PATH. These feasibility studies will best be accomplished by adaptive management, which, in turn, will provide the empirical foundation for CRI. The work of the CRI has been extensively peer reviewed by the Independent Scientific Advisory Board (a panel of well-known scientists with expertise in salmon) and the editorial process of peer-reviewed journals.

Finally, although Mann and Plummer include the sidebar piece about "the other H's" (harvesting, habitat degradation, and hatchery misuse) (p. 718), those few words in comparison with the much longer discussion of dam breaching reinforces a pattern of Columbia Basin salmon science, which attempts to determine whether management to mitigate one isolated risk factor can eliminate the peril faced by salmon.

Currents of controversy over how to save salmon of the Columbia River.

There are too many culprits responsible for the threatened status of salmon to look for single-factor solutions. Although science may not resolve political wars and deliver the "Holy Grail," the testing of multiple hypotheses with carefully collected data will provide a basis of what actions can rescue salmon from the brink.

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Mann and Plummer portray the debate over dam removal on the Snake River as one that has divided the scientific community; however, I think that portrayal is in-

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