



Agenda item 5.9
For decision

Council

CNL(01)29

Transgenic Salmon

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Transgenic Salmon

1. At its 1997 Annual Meeting, the Council had expressed concern about the risks posed by transgenic salmon and had adopted Guidelines for Action on Transgenic Salmon (Annex 1). Under these guidelines the Parties agree, *inter alia*, to:
 - i) advise the Council of any proposal to permit the rearing of transgenic salmonids and provide details of the proposed method of containment and other measures to safeguard the wild stocks;
 - ii) take all possible actions to ensure that the use of transgenic salmon, in any part of the NASCO Convention area, is confined to secure, self-contained, land-based facilities.

2. It seems very likely that the first transgenic animal/fish available as food might be the Atlantic salmon. Indeed, last year Canada had advised the Council that a company with a research facility located in Eastern Canada is currently producing transgenic Atlantic salmon and rainbow trout broodstock in a secure land-based facility. The Department of Fisheries and Oceans had not received any formal proposal for commercial rearing but confirmed that if this should occur then the proposal would be thoroughly examined and a risk analysis performed in accordance with the Fisheries Act and the Canadian Environment Protection Act. The representative of the USA had informed the Council of preliminary discussions between a company and the US Food and Drug Administration (FDA). The permitting process, which includes environmental analysis, was briefly described and the USA agreed to keep NASCO informed of the permit process. I have been advised that the FDA is treating the permit application process for transgenic salmon as if it were a drug and that, given their competitive nature, the status of such applications is not usually revealed. Nevertheless, it is unlikely that there will be a decision on this application for some time. If the application is being treated on the basis of a drug, it is examined from the perspective of whether the resulting salmon are safe for human consumption. NASCO is, of course, only able to deal with the impacts of transgenic salmonids on wild salmon stocks and their environments not on food safety aspects.

3. At the Aqua Bounty facility on Prince Edward Island, the President and I saw transgenic Atlantic salmon (and other species) and it was very striking how much bigger (4-6 times) these transgenic salmon were than the non-transgenic salmon of the same age, although we were advised that size at maturity was the same. We were told by the hatchery manager that he did not think it likely that use of the technology on a commercial scale would be in land-based facilities because of the expense and because of biological factors linked to the metabolism of transgenic salmon. He foresaw the use of sterile transgenic salmon in sea cages. We felt great concern about the use of transgenic salmon in sea cages because we have doubts that 100% sterility can presently be achieved in a commercial situation. Just one transgenic salmon escaping and interbreeding could cause irreversible change in wild populations.

4. As was noted last year, the North American Commission's Discussion Document for Revision to the Protocols for the Introduction and Transfer of Salmonids proposes a different approach to that agreed by the Council, in that reproductively viable transgenic salmonids may be introduced to land-based facilities only where the possibility of escapement is minimal, but transgenic salmonids may be used in marine and freshwater cages if they are reproductively sterile. While these proposals for revision to the NAC Protocols have not been agreed by the Commission, they do propose a different approach to that recommended in the Council's guidelines. Clearly those promoting the development of transgenic salmon envisage their use in sea cages if rendered sterile but this would not be consistent with the NASC● Guidelines.
5. The Council may wish to consider the difference in approach between the Council's Guidelines and the proposals for revision to the NAC Protocols and decide if any further action is required in relation to transgenic salmon.

Secretary
Edinburgh
11 May, 2001

COUNCIL

CNL(97)48

NASCO GUIDELINES FOR ACTION ON TRANSGENIC SALMON

THE PARTIES to NASCO are aware of the development of transgenic salmon (i.e. salmon that contain genes from another organism). While there may be benefits from the introduction of such salmon if, for example, they could not interbreed with wild stocks the Council recognises that there are also risks which may lead to irreversible genetic changes and ecological interactions.

The Council considers that there is an urgent need to take steps to ensure the protection of the wild stocks and has therefore agreed to cooperate to develop means such that transgenic salmon cannot impact upon wild salmon stocks. The following specific steps are agreed.

The Parties will:

- a) advise the NASCO Council of any proposal to permit the rearing of transgenic salmonids and provide details of the proposed method of containment and other measures to safeguard the wild stocks;
- b) take all possible actions to ensure that the use of transgenic salmon, in any part of the NASCO Convention Area, is confined to secure, self-contained, land-based facilities;
- c) take into account the ongoing work by the Parties to the Convention on Biological Diversity to develop a Protocol on Biosafety;
- d) inform their salmon producers of the potentially serious risks to wild stocks of this development and consult with the salmon farming industry on this matter through the new Liaison Group established between NASCO and the international salmon farming industry;
- e) take steps, as appropriate, to improve knowledge on the potential impacts of transgenic fish on the wild stocks and their habitat;
- f) examine the trade implications associated with transgenic salmon in accordance with World Trade Organization Agreements and other instruments of international law.

The Council will:

ask the newly established Working Group on the Precautionary Approach to consider specifically the risks and conservation benefits from transgenic salmon as part of its response on introductions and transfers.

Biotech Confusion

The ecosystem may or may not be ready for the first genetically engineered salmon, but the American regulatory system emphatically is not. It is stuck in the legacy of decisions about biotech regulation made in the mid-1980s, when food was food, drugs were drugs and a lot of people thought that most biotech products were going to be microbes. The creatures and products that have come along instead — corn that makes its own pesticide, animals that make drugs, goats that carry a spider gene and make silk — are straining that simple model. The case of the salmon shows how badly the framework needs updating.

A coalition of 60 consumer and environmental groups recently asked the Food and Drug Administration to block importation and marketing of the souped-up salmon, which reaches full size faster because of genetically stepped-up production of growth hormone. The fish have been under development under controlled conditions in Canada, but they have not been commercially marketed. No significant health issues have been raised about humans eating the fish. But environmentalists fear that if the altered fish escape from the ocean pens in which commercial fish are typically grown, they could mate with wild salmon and wreck ecological balances.

That issue is unlikely to get the best possible airing at the FDA, which has classified the genetic enhancement as a drug for animals. That technically means that the main task of its review will not be to look at the effects of the fish on the environment or the fish on the consumer, but to study the effect of the growth hormone on the fish.

Environmental issues will be covered, the FDA promises. But the environmental and marine specialists who could best address them are housed at other agencies, and no law requires their routine involvement in decisions

about the handling of genetically modified organisms which might get released into the environment. Even the Environmental Protection Agency gets involved only in narrow circumstances. It was able to regulate Starlink, the bioengineered corn that found its way into the food supply after being denied a permit for human consumption, only because the corn was classified as containing a pesticide.

Such piecemeal authority will not foster consumer confidence in the growing number of genetically modified organisms, especially given the irrational fears that have swept Europe. Consumers can benefit hugely from these products, but only if whatever needs checking is being checked.

Those producing these organisms likewise need to have a reliable notion of what sort of hurdles they face. The opposite situation now obtains. Most checking is voluntary, especially for foods, but the coalition that petitioned the FDA on the salmon has also filed the request with the Departments of Agriculture, Commerce, Interior (which houses the Fish and Wildlife Service) and Defense (the Army Corps of Engineers). Any of these could theoretically claim jurisdiction under statutes ranging from the Endangered Species Act to laws governing the control of exotic foreign species.

A better way is mapped out in legislation being drafted by Representative Peter DeFazio, Democrat of Oregon. It would require approval of new genetically modified organisms through a single "address," probably an assistant EPA administrator for biotech, who would then be required to consult with experts in other agencies, depending on each organism's properties. The exact address is less important than the idea of a process flexible enough to keep up with bioengineers' limitless ingenuity.

—THE WASHINGTON POST.

Other Comment

Not How to Protect Israelis

[Prime Minister Ariel Sharon said on Sunday:] "We will do everything necessary and use everything we have to

show equal if not greater staying power. Widespread domestic criticism of Saturday's strikes on the West Bank suggest that Mr. Sharon does not enjoy carte blanche in trying to

...ator George Mitchell, declared: "A cessation of Palestinian-Israeli violence will be particularly hard to sustain unless the government of Israel freezes all settlement construction activity."

The *intifada*, if it is to end, must first be seen for what it is: Palestinian resistance to Israeli military occupation, exemplified by Israel's continuing confiscation of Palestinian territory and destruction of Palestinian property in order to build and expand illegal settlements.

For Palestinians, the primary goal is the return of our land and the establishment of a viable, contiguous state on a portion of historic Palestine. Continuing Israeli settlement not only makes this goal impossible to attain, it

negotiating a withdrawal. Since the Oslo accords in 1994, the number of Israeli settlers on Palestinian land has increased by nearly 70 percent. Every new brick laid in Israeli settlements is transformed into a stone of Palestinian defiance.

The Palestinian Authority fully supports implementation of the Mitchell committee's recommendations, including those that call on us to "make a 100 percent effort" in addressing Israeli security concerns.

The Sharon government has accepted only those parts of the report that it finds palatable. Upon hearing the report's recommendations, Ariel Sharon responded by announcing that his government would seek \$375 million in subsidies for settlement expansion, and

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Ukraine's Progress Should Be a P

By Goran Persson and Romano Prodi

STOCKHOLM — The no-confidence vote in the government passed by the Ukrainian Parliament on April 26 set off reverberations both in and outside Ukraine. The vote gave cause for concern about the future. The next day the European Union expressed its regret and called on the Ukrainian government not to abandon the reform policies pursued by the outgoing prime minister, Viktor Yushchenko.

The EU had been closely monitoring developments in Ukraine. Well before the political changes came to a head, the importance that it attaches to continuation of a firm policy of reform was communicated in various ways to the country's political leaders.

Ukraine is a key factor in the development and maintenance of stability in the whole of Europe. With 50 million inhabitants the country is one of Europe's largest. It occupies a geographically strategic posi-

tion. It is in the EU's interest to ensure Ukraine's favorable development. The closing down of the last reactor at Chernobyl last December was one very significant example of the measures already taken by Ukraine to the benefit of Europe as a whole.

Favorable development to the east of future member states is vitally important to the Union's continued enlargement. Of primary concern are Russia and Ukraine, both of which border on four applicant countries. Any political instability, regressive economic development or fragmentary reform in these countries would threaten to create a new discontinuity in Europe — a political, economic and social divide — in the wake of EU enlargement.

Such a development would benefit no one — not EU member states, the candidate countries or Ukraine and Russia.

If this bleak scenario is to be prevented, Ukraine must assiduously pursue a path of democracy, rule of law and economic reform.

Most voters and elected representatives in Ukraine want to continue along the path of closer cooperation with the EU. The same wish applies to the Union. The necessary instruments — a partnership and cooperation agreement and a common strategy for Ukraine — are in place. During a visit to Kiev in February, an EU mission led by the Swedish foreign minister voiced the desire for a long-term, increasingly in-depth partnership with Ukraine.

Closer cooperation with the EU is in no way an obstacle to close, fruitful relations between Ukraine and Russia. Extensive cooperation on a basis of equality between these two countries is in everyone's interest.

They say it takes two to

For Closer Cooperation

