

mixed success operationally. The German air force seems to have had a particularly unhappy time with it. Unless this new project comes off, few of the aircraft industries involved in the six countries can have a very good chance of survival. West Germany's industry is perhaps the weakest of all, but despite this there were reports last week that the West German Government was keen to gain design leadership of the project.

Britain's bargaining position in the talks, which are likely to last about six months, will probably be based on two arguments. On the one hand, it is likely to be argued that alone among the six, Britain has the capacity, though not perhaps the inclination, to go it alone. On the other hand, Britain is likely to point to groundwork already carried out by the British Aircraft Corporation, which has been putting together design details for a variable-geometry aircraft. (It is not in fact clear yet whether the British Government is basing discussions exclusively on this design, or would be willing to consider something else.) And although Britain's withdrawal from the Far East may make it easier to bring British requirements into line with those of Europe, there are still likely to be differences of opinion over specifications. The estimates of possible sales of 1,000 aircraft, worth £2,000 million, are therefore premature.

Collaboration on this scale always increases costs. According to Mr Healey, the British Minister of Defence, a two way collaboration increases costs by about 20 per cent. A six-way collaboration would doubtless be very much worse but, even so, if it is assumed that research and development costs are divided equally, the cost to each country of developing the aircraft collaboratively would be about a quarter of the cost of going it alone. This is a compelling inducement for the negotiators to reach reasonable terms.

No Prisons for Zanzibar

WESTERN penologists may envy the freedom of other countries to conduct experiments in penal reform. Zanzibar is to abolish courts of law and prison sentences for all crimes other than murder and robbery with violence. The governing council of the island hopes to eliminate prisons altogether, and in future offenders will be sent to penal reform institutions for five years where they will be taught a trade.

The Tanzanian High Commission in London has not yet received details of these reforms, so it is hard to assess their significance. It is not known what rights of defence will be accorded to those accused of crimes. And though it may be a fine ideal to abolish prisons, "penal reform institutions" could be different only in name.

Announcing the reforms on July 14 the President of Zanzibar said that poverty was the principal determinant of crime and that the government would concentrate on raising the standard of living. Although poverty is undoubtedly related to crime, it seems to be relative rather than absolute indigence that encourages antisocial activity. The Zanzibaris may be naive in supposing that increased wealth will diminish crime, or that offenders will be reformed by the acquisition of an honest trade. But there is much to be gained from experimenting with the conventional penal system;

prisons are expensive, degrading and lamentably inefficient in performing their stated aims. The Home Office is unable to supply recent figures but more than half the British prison population of 1961 had been in prison before. Britain now spends some £30 million a year on the prison service; an average weekly cost of £14 per prisoner. If more than half the people who have received this expensive treatment can be expected to commit further crimes on their release, it is hard to be satisfied that prison either benefits the prisoner or protects society.

Since 1948 it has been judicial policy in Britain to send increasingly fewer categories of offender to prison. The Zanzibaris have apparently taken this policy to its logical conclusion. The results of their experiment, if it has been properly set up, will be watched with interest.

Weeds Underwater

MACHINERY, chemicals and biological control are being used on an increasingly large scale to clear weeds from British lakes, streams and ditches—a job traditionally carried out by unskilled labourers. In a recent bulletin, Mr T. O. Robson of the Agricultural Research Council's Weed Research Organization at Oxford describes the basic principles of weed control and summarizes new methods which have either already been shown to be successful, or which are still at the experimental stage (*The Control of Aquatic Weeds*, HMSO, 5s. 9d.).

Although aquatic weeds may cause flooding and silting and also interfere with recreational activities such as fishing, boating and bathing, they also aerate water, provide shelter for smaller animals, consolidate the beds and banks of streams, provide food for other organisms and serve to fertilize deposits wherever plant detritus accumulates. For these reasons, Mr Robson maintains that total eradication of water weeds is seldom desirable, and that partial control by removal of some plants but not others, or temporary suppression of all plant growth at certain periods of the year, are usually more acceptable.

Most methods have drawbacks and, as Mr Robson points out, the possible adverse effects of, for example, herbicides on humans, fish and farm animals must always be carefully considered. Physical removal of weeds is probably the commonest method of control, and for this purpose boats fitted with either V-shaped cutters or reciprocating cutter-bars are used. A mowing machine has been introduced from the United States but has not been used to any great extent in Britain so far. Raking or "clotting" is a slow and expensive task and one which Mr Robson maintains is used only as a last resort. Dredging is also unsatisfactory because it does not eliminate the roots and underground parts of weeds, so that plants rapidly re-establish themselves. Experience of burning weeds on the banks of watercourses is limited, but Mr Robson points out that in some situations it may be possible to burn plants killed by herbicides.

Although biological control would seem to be a desirable method of controlling water weeds, it has not been used very widely. As indicated in the bulletin, however, the Ministry of Agriculture, Fisheries and Food recently began an investigation into the possible value of a fish—the Chinese grass carp—in this connexion.