study showed that to break even solely on the basis of an unmanned program, would require a program considerably larger and more active than the one NASA happened to run. Thus the space agency was obliged to find another customer besides itself, even if it meant tailoring the shuttle's design to meet someone else's special demands.

The space agency, of course, found that the Air Force could use the shuttle. And the Air Force soon found itself in a novel and happy situation: NASA needed Air Force business even more than the Air Force needed a shuttle. Obviously the shuttle would replace the Defense Department's defunct Manned Orbiting Laboratory project; but, as Air Force Secretary Robert Seamans told a congressional hearing last year, "I cannot sit here today and say that the space transportation system is an essential military requirement."

The arrangement that eventually evolved between NASA and the Air Force called upon the latter merely to contribute its political support (and its business), and not to pay for the shuttle's development. NASA's civilian image was thus preserved intact, but in exchange, the space agency was obliged to meet special Air Force design requirements, among them a demand for a more complex and costly delta-winged orbiter stage, rather than a simpler straight-winged job.

The space agency's rapid footwork to protect its most coveted project has led Senator Mondale, the shuttle's most persistent critic in Congress, to complain that "instead of [following] the normal process of presenting a clear and consistent justification for a program—and then seeking to fund it—NASA wants to continue this project on a fund now, justify later basis."

Mondale and others are convinced that the shuttle will become a make-work tool, a means by which the space agency may hope to lift its budget skyward by its own bootstraps, as Proxmire puts it. Such suspicions are reinforced by the fact that NASA has merely deferred to the 1980's, and has not abandoned, its plans for a space station, a space tug, and most of the other accouterments of the original space transportation system.

So, come this spring, not long after cherry blossom time, Mondale, Proxmire, and other veterans of the SST fight will muster for their fifth offensive

Environmental Action Organizations Are Suffering

Activist environmental organizations have fallen into the doldrums this winter. Contributions and membership levels have not increased at rates anticipated a year ago, and "ecology" seems to have lost some of its charisma.

Some observers are speaking ominously of an "environmental backlash" created by fears that the costs of environmental reform are more than the public is willing to pay. It would probably be more nearly accurate to say that there has been a subsiding of the wave of public enthusiasm for the cause which swelled around the time of Earth Day on 22 April 1970.

The old-line, nonpolitical conservation groups, many of which have a solid base of support from foundations, have not reported much suffering. The Izaak Walton League, the Conservation Foundation, and the Wildlife Federation, for example, report that 1971 was a year of steady, if not exciting, increase in membership.

But the activist organizations, most of them new, which rely on continuous publicity and public enthusiasm, are feeling the pinch. Gifts to them are not tax deductible and foundations are legally prohibited from supporting lobby groups. The Sierra Club must be included among these, because in 1969 it lost the security of its tax-deductible status after it began overt lobbying activities. For the Sierra Club, "The problem came up overnight. In September everything was rosy," says Richard Lahn of the Washington office. At a November board meeting, the club laid on a staff hiring freeze and put restrictions on travel, telephone, and postage spending. In a staff memorandum it was explained that new monthly memberships were substantially less than the projected 3000, that book sales had dropped sharply, and that overdue bills were piling up. Some think last year's hike in membership dues—from $12 to $15—has contributed to the financial slowdown. Sierra Club publications are not selling as well as expected, partly because of the high cost of the coffee-table variety and also because Time-Life is making inroads on the market with a series of luxurious books on natural wonders.

Friends of the Earth (FOE), a lobby group established in July 1969 by former Sierra Club executive director David Brower, is in more serious straits. Its membership, now 22,000, has not risen significantly in the last 6 months. The organization is now $250,000 in the red because it hasn't been able to summon the money to pay back substantial loans it procured in order to get launched. Drastic trimming has resulted—the San Francisco office has been closed down, and offices in New York and Albuquerque are folding. An expensive direct-mail campaign conducted last fall turned out to be a losing gamble.

Environmental Action, the group that spent 3 months and $100,000 organizing the 1970 Earth Day, is now running on the thinnest shoestring of all. The staff of nine are working on subsistence wages of $55 a week. Direct-mail solicitations have produced a disappointing yield. "So much of the energy that should be going into action programs is going into worrying about the money situation," laments the group's coordinator Sam Love. But, "we're not going to fold—because we're stubborn."

The money slump has also affected Zero Population Growth (ZPG), the only population control organization that has forsworn deductibility for political activity. ZPG's Washington-based director of political activities Carl Pope says ZPG's problems are somewhat different from those of other environmental groups because of the diffuse and long-term nature of the problem. People might be more concerned "if the earth were being worn away by all of our footsteps," he says, but well-publicized developments (such as, hopefully, the forthcoming report by the President's Commission on Population Growth and the American Future) are

against the space shuttle in 3 years.

But victory over the SST notwithstanding (and rumors persist in Washington that it will be revived), the prospects for scuttling the shuttle are slim.

The issues, after all, despite their seeming similarity, are different in crucial respects. While new political visibility accorded the shuttle by the President's backing may render it more vulnerable to attack by a Democratic Congress, the shuttle seems to possess few of the SST's intrinsic weaknesses. In the first place, the central moral issue raised by the SST was the propriety of government subsidy for an essentially commercial enterprise. Moreover, the only obvious beneficiaries of this subsidy, apart from the aerospace industry, which needed the work, were a handful of airlines and a limited number of affluent travelers who looked forward to going to the same places for the same reasons as always, but at a slightly more exciting speed.

The shuttle, by contrast, has no such commercial overtones, and, by any measure, it is a more truly national enterprise than the SST. Certainly without it the manned space program may be expected to wither considerably, and perhaps vanish altogether, by the end of the decade.

For both the SST and the shuttle, however, the central issue of substance is economy. But here NASA seems to have covered its flanks with cost-benefit analyses more thoroughly than the Department of Transportation ever did. As a result, the shuttle's opponents have so far been reduced to hopeful probing for weak spots in the information and assumptions that went into cost-benefit studies. For instance, Mondale aides say that they doubt the veracity of data—apparently furnished mostly by the Lockheed Corporation, a contender for shuttle contracts—which the study uses to argue that the shuttle would lead to significantly lower payload costs and thereby reduce the overall cost of the entire space program. There appears to be no hard, recent information to refute this contention, however.

The critics also perceive a certain slipperiness to NASA's estimates of shuttle costs. In 1969 the space agency put a $5.2 billion price tag on a fully reusable and exceedingly sophisticated shuttle design. By last year this estimate had crept publicly up to between $6 billion and $8 billion and less publicly to

from Money Shortages, Slump in Public Commitment

needed to keep people worried. The movement was not helped when the press made front-page stories of a report sponsored by the Washington Center for Metropolitan Studies which purported to show that the baby boom had been supplanted by a "baby bust." But the real blow in ZPG's solar plexus has been delivered by "Right to Life" citizens groups who have mobilized vocal anti-abortion campaigns. While ZPG's emphasis is on family planning rather than abortion, the Right to Life people "stopped us in our tracks," says Pope. The ZPG's immediate goal, which is to push through Congress a joint resolution endorsing a national policy of population stabilization, is now in cold storage.

Discussions with the groups mentioned above confirm one FOE staff member's observation that "the road for nondeductible groups is a very hairy road indeed."

None of the reasons for the leveling off of public enthusiasm are particularly obscure. The campuses are not presently a prime source of emotional energy. The Nixon economic freeze has made nondeductible charitable donations an early casualty, and many political donations are now going to presidential candidates rather than to causes. Some people feel, too, that the market has become glutted with public-interest lobby groups that the public, now back in its normal state of anxious apathy, is reluctant to support.

In a way, environmental activism has entered its own Phase II. Now that the consciousness-raising stage is over and pollution is firmly associated with evil, few issues are susceptible to black and white interpretations. Battles are moving off the front page and into the back rooms of the legislatures and the courts. The Environmental Defense Fund (EDF) and the National Resources Defense Council, for example, both of which are involved in environmental court battles, are still reasonably well off. Rod Cameron of the 4-year-old EDF points out that EDF is engaged in specific, visible activities and thus is more assured of a stable financial constituency.

Assurance that the issue is still foremost in the concerns of Americans comes from a poll conducted last summer by Common Cause, the national citizens' lobby. The 35,000 persons who answered the 14-item questionnaire ranked environmental protection as second in importance only to withdrawal from Vietnam.

Nevertheless, the activist groups are realizing that better planning and increased expertise will be necessary to press their cause within government. Local citizens' groups are increasingly addressing themselves to such specific projects as trash recycling or attempts to block inner-city expressways and undesirable power plants. But in Washington, the activist groups, many of which are manned by young people barely out of college, must work their way behind the scenes and into the tough legal and technical complexities that surround policy-making.

The backlash they face comes not from the public, but from businesses and industries that are finally taking the movement seriously and are responding forcefully—with stepped-up lobbying; sophisticated advertising campaigns proclaiming their dedication to sunshine and green grass; and employee "education" programs, which, crudely summed up, sometimes amount to saying: "Which do you want, clean air or a job?" (an approach commonly called "environmental blackmail").

Environmental activism has lost a lot of innocence since the flowery euphoria that characterized Earth Day. Typically, the young people working in the little offices in Washington still believe they have the public behind them and are determined to stick with their increasingly difficult cause. No one is particularly concerned that ecology might be a passing fad, because, as they say, "If it's a fad, it's the last fad."—CONSTANCE HOLDEN