time to root among straw and roughage and to guarantee periodic exercise times for restricted sows.

In 1988 Sweden's pioneering Animal Protection Act came into force. The Act states that: "animals kept for production of food, wool, leather or fur shall be taken care of under good housing conditions and in a way that promotes their health and makes it possible to behave in a natural manner." The restricted "battery cages" for laying-hens are to be illegal by 1998; cattle are to be put out to graze in summertime; sows may no longer be tethered; slaughtering is required by the law to be as humane as possible; and cows and pigs are to have access to straw and litter in stalls and boxes. While in most Western countries the Ministry of Agriculture tends to be the strongest supporter of intensive high technology farming, the Swedish Ministry has declared itself in support of animals, arguing that technology must be adapted to the needs of animals, and not the other way around.

The new laws in Switzerland and Sweden give heart to those in other industrialised countries who are pressing for action to regulate the abuses to animals carried out in the name of hightechnology, intensive farming.

Vivisection

Popular pressure to limit and regulate the abuse of animals has been most intense in relation to the suffering, pain and death caused to highly sentient animals in scientific laboratories. In the last decade this has led to the introduction of new and stronger laws governing animal experiments in the United States, Australia and almost every country in Western Europe.

In different ways, the new laws do impose limits on the number of animals used in experiments; on the degree of pain and distress permitted; and on the conditions under which laboratory animals are housed and cared for. National bodies and local committees based at each research station are charged with the responsibility of ensuring that the least possible pain is caused to animals and that the animals are well cared for. In some countries these local committees even include representatives from animal welfare groups.

The law is also beginning to change in the conditions it seeks to impose before experiments are conducted in the first place. Statutory requirements in several countries still insist that before new chemical substances are incorporated in food and medical products they must undergo a strict toxicity test (the notorious LD50 test) that involves a group of animals being force-fed large quantities of the substance until 50% of them die. In the United States the law requires a less severe test, the 'limit' test. While this involves the death of fewer animals, it still means animals must die before a new substance is declared safe. The number of animal toxicity tests has increased dramatically in recent years as more and more new substances are developed. This is in spite of the fact that there are alternatives, and that animal tests are clearly not the best way of measuring the safety of a new substance. Recent proposals by the European Community to amend its directive on the classification of dangerous substances may mark the first step in ending the requirement for animals to die. The Community has agreed to accept an alternative toxicity test (the 'fixed dose' procedure) which, while it still uses animals, requires only a small number of animals and does not require the death of any of them. The New Scientist reports that the Commission aims to "create a framework whereby regulatory bodies throughout the world all accept the same data for classifying chemicals". While this is a significant step forward, another proposal being debated in the Community threatens to expand the list of products that require tests. Moves are afoot to make it mandatory for animal tests to be used on all cosmetic ingredients and finished cosmetic products. This would be disastrous, and would strike a blow at the rapidly growing cruelty-free cosmetics industry.

While new laws and regulations are limiting the worst abuses of vivisection there is still a long way to go in reducing the number of experiments carried out and improving the conditions under which animals are kept. It should also be remembered that there is no legislation that challenges the fundamental premise of experiments on animals; no legislation that specifically requires a researcher to prove to an independent body that the experiment proposed is necessary. Campaigners look forward to the time when the generalised legal acceptance of animal experiments is replaced by stringent procedures forcing scientists to justify occasional experiments with a well argued case showing that the potential benefits to humanity, or to animals, clearly outweigh the cost to the animals.

Wildlife

Humanity's disastrous impact on the wild creatures of the planet is perhaps the clearest sign we have that we must take urgent action to transform our relations with the animal kingdom. Whole species are disappearing from the planet because human beings have destroyed their habitat, have polluted the lands and seas, and have hunted them out of existence. Only the law can save the animals — only national, regional and international legislation that is strong, enforceable and implemented with vigour can stop the slaughter of the elephants, whales, dolphins, tigers and jaguars, crocodiles, turtles, rhinos, gorillas, parrots and so many other species.

Since the 1970s there has been an enormous amount of legislation around the world concerned with the conservation of wild animals. Most countries now have regulations to protect individual species and have also designated zones and national parks where all the animals in such areas are protected.

The problem at a national level is to give teeth to the legislation that exists. Laws to protect wildlife are too often flouted because the authorities that are charged with carrying them out lack the resources they need — they lack money, skilled personnel, equipment. In many cases they lack the most important ingredient of all — a national will to enforce the law.

Legislation to protect wildlife will have little effect if it is all done on a national level. What do the dolphins or the elephants know about national boundaries? Habitats are being destroyed by pollution that comes from surrounding nations; fishermen travel the world to catch as many fish as their technology will allow; those who hunt and sell live animals, furs, skins and other products from endangered species do so in order to supply a multi-million dollar international market; poor farmers take the precious resources needed by animals because the involvement of their country in a global economy has made them so poor that they will do anything in order to survive.

In the last 25 years governments have responded to the gravity