BY the Way...
by Lindy Davies

Watersheds and Wars

The famous photographs of the Earth, taken coming back from the moon, show no national boundaries. But they do show watersheds. Somewhere along the way, out of the consciousness that emerged along with those earth-icons, began a small, quiet, and eminently sensible movement to redraw the map, replacing arbitrary nation-state boundaries with the natural lines of watersheds. It didn't get very far, of course; sensible ideas that threaten power and privilege seldom do. But I am reminded of the "watershed-nation" idea when I see frequent reports of hatred and war caused by disputes over water.

If you close your eyes, quick, and picture a map, what do you see? Is it the four-colored nation map you remember from sixth-grade geography, or is it a physical map of rivers and mountains? The political maps are what we're used to; they are what makes "sense" to us. Yet there is an uneasiness in the kind of sense they make. The tired clichë about the map of Africa ("I just don't know what countries there **are** over there, any more!") can now be applied to what was once the Soviet Union ("Kioskistan? Where?"). And how many people really know where Kosovo is, or what country **it** used to be?

Our first Geography unit in sixth grade was Europe, where the boundaries are sensibly physical. Between France and Spain and Italy and England, there are the Pyrenees and the Alps, the Rhine and the Channel — and different languages across each. The boundaries had been pushed to those geographic limits by centuries of savage war, but we weren't studying **that**. Once we had learned the "civilized" boundaries of Europe, we were encouraged to apply the same sort of rationale to the newer lines, some of them just etched into the sand that week. A friend of mine from India once characterized his homeland — a nation of some 300 languages, some of them native to a single village — as "a bit like Europe, if Europe were a single, poor, colonized nation."

Imagine the arrogance of drawing a sovereign national boundary, the mark that delimits patriotism, World Cup teams and trade restrictions, directly across a major river, and leaving the poor locals to sort out rights! If their political leanings were useful to a superpower, they were armed sufficiently to dam the river, use the water and make their desert bloom. *(continued on page 33)*

But when the little nation is no longer useful to the Big Power, the boundaries — and the arms — are left behind.

The United States is somewhere in between the European "old boundaries" (which come in a package with royalty, and "old money") and the brand new "Lite" boundaries like those of Rwosovo and Pakasandra. Mexico still has, after all, about fifty miles of the Colorado River. Well, they have the basin, anyway, for the dammed Colorado does not flow south of Southern California. What do you suppose that stolen flow has been worth to Southern California, over the last, say, fifty years? One can get an idea by comparing the desert terrain of Baja California with the lush lawns of Los Angeles, and the avocado groves and irrigated pastures of the hinterlands! Could Mexico have used that water to irrigate some of its own prosperity? Have the people south of the border any rights to the water that flows (or once did, anyway) over their sovereign territory?

Hand-wringing reports are being published of the "freshwater crisis" — and indeed there is a crisis, but I suspect that water is merely a symptom of it. All over the world, water shortages are threatening crops and peace between nations. Estimates vary, but at least one billion people in the world today (one in six) lack access to clean drinking water, and millions suffer and die from water-borne diseases long since conquered in the developed world. Yet the same reports show, almost reluctantly, that there is plenty of water. There is worry about urbanization and its burgeoning water demands. Yet about 70% of global water use is for agriculture, and it is estimated that half of that water does not reach the plants it is supposed to nourish. "All urban needs well into the future could be satisfied by shifting just 10% of agriculture's water to the cities," reports Wade Graham (in Harper's, June 1998), "an increment easily absorbed by adopting standard conservation practices on the farm."

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The natural water cycle is immensely powerful, and has no respect for national boundaries. Water evaporates and rains, and flows from high to low over time, unstoppable by walls of rock. On the other hand, it takes a great deal of work to move large quantities of water up hills and across deserts. That is what has been done in California, however, for decades — so that people

could dump it on lawns and alfalfa fields and sparkling automobiles, for free!

Solving the freshwater crisis is no mystery. Techniques of efficient irrigation are well-developed — but not widely implemented. Some bemoan the lack of sensible economic incentives for doing that, but the principles of how to get them are also known. Water must be treated as a natural opportunity, held in trust by the community — and it must be priced according to its opportunity cost. These are the recommendations made by Prof. Mason Gaffney (1991). Gaffney insists that we tally the full costs of water provision, noting:

> *To understand the meanings of "use" or "consume" in economics we must think in terms of entropy. The water user takes in pure water, at high elevation, at a time and place of his choice. He returns adulterated water, at lower elevation, at other times and scattered places of his choice, however inconvenient for those below. As to water quality, many return flows are worse than no return at all.*

(A point that will undoubtedly not be lost on the folks in *Baja California*!)

Some economists argue for full privatization of water rights, so that the marketplace can work its magic. But water is a limited resource whose value goes up with time. Outright privatization will not yield sensible allocation of water; it will lead to riparian hoarding and profiteering.

The community must assert its right to the water, and charge rent for its use. This is not mere theory, either: it passed the test in California in the 1880s. Frontier California was a desert; no trees grew naturally in San Francisco. Land barons scarfed up all the land along rivers and charged premium prices for water. Small farmers couldn't make a living, and cattle ranchers wielded political clout. (Sound anything at all like the South America of today?) But it was a young state without so terribly many voters; a 28-year old schoolteacher named Charles Wright got himself into the state legislature, and he managed to get passed a law that created great prosperity in California. Under the Wright Act (1887), irrigation projects were financed by a tax on land values. Farmers paid for what they got — instead of creating a windfall for the river barons, water resources were spread equitably, and usefully, across California's Central Valley, transforming it from scrubby pastureland into the nation's leading agricultural region. Under the Wright Act, family farms prospered. The average size

of farms actually went down — probably the only sustained episode of that in US history.

Later, when the Federal Government built massive water projects extending irrigation to other dry areas in California, all these friendly trends were reversed. Instead of being sensibly and equitably priced, its proceeds serving as a state revenue source, water was provided by the Federal Taxpayers at almost no cost — creating a tremendous incentive to waste water and consolidate landholdings into giant, corporate farms. The contrast between the successful, conservation-friendly ground rent system and its disastrous pork barrel replacement couldn't be clearer.

But — even if Californians had managed their water sensibly and equitably for themselves, might they not have stopped the Colorado's flow, anyway? Perhaps. However, even if Californians don't care about their neighbors across the line, they do have some incentive to care about future Californians, their children. And so, sensible water management would have been less likely to place unsustainable demands on water sources.

Anyway, the fabulous prosperity of Southern California was not transferred to Mexico (or to New Mexico, for that matter). We have the insanity of those imaginary lines to thank for that. Nevertheless, an understanding is emerging that nobody loses when we treat resources as a rentable opportunity, held in trust by the community. Nobody loses, that is, except the speculators — and the people outside our community. The speculators deserve no free rides! And as for those "outside" the community: is our community the political entity — or the watershed? Or the entire planet? Close your eyes once more and remember that four-color political map, from sixth grade geography. Then think of that photo of the whole earth. The boundaries vanish, in a puff, like an odd fantasy, don't they? There are some boundaries of thought, equally commonplace, that are every bit as ephemeral.