

UAS regulation in foreign countries: Alternatives to UAS operations in the United States.



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The “Drones” are coming...

- * Wide range interest in Unmanned Aerial Systems (UAS) across the globe
- * Rapid growth has been stymied in the U.S. due to slow progression of integration and privacy concerns
- * U.S. may lose competitive advantage
- * Other countries provide opportunities for potential research and collaboration



Many Countries More “UAS User – Friendly”

- * Many countries have been more open to UAS than the US
 - * Australia
 - * New Zealand
 - * Japan
 - * Brazil
 - * Mexico
 - * African nations
- * Others are more lenient, but still not “open”
 - * Canada
 - * UK



Canada



- * Two groups: “Unmanned Aerial Vehicles” (commercial use) and “model aircraft” (recreational use).
- * Model aircraft: less than 77.2 pounds, individually owned (no companies allowed) and not profit-seeking.
- * “Unmanned Aerial Vehicles” and require Special Flight Operations certificates.

Mainland Europe



- * Much of mainland Europe operates under the jurisdiction of the European Aviation Safety Agency (EASA),
- * Need certification in any situation
- * Certification granted on a case-by-case basis
- * Requests proposing flight in unpopulated areas usually approved

UK



- * 20 kg (or 44 pounds) – considered “small unmanned aircraft”
 - * Needs “Permit to Fly” classification, which is relatively easy to acquire
- * Anything heavier or used for aerial photography requires a “Permit to Carry Out Aerial Work;” has tougher restrictions
 - * E.g.: pilot qualification, design & construction certificates.
- * Privacy less of an issue due to differences in laws

Australia

- * An “Unmanned Aircraft System” profit-seeking “air work,”
 - * Has requirements including pilot certification, but relatively easy to meet
- * Otherwise “model aircraft, flown for sport & recreation and education,” which essentially are not regulated (except VFR required)
- * Privacy loop hole – current law does not apply to individuals



New Zealand

- * Very few limitations up to 25 kg (55 lbs)
- * No operations near airports, above 400', line of sight (over 15 kg [33 lbs])



Brazil

- * Brazil has become a leading player in UAV use
- * Uses UAVs to patrol its borders
- * No laws that cover civilian use



Mexico

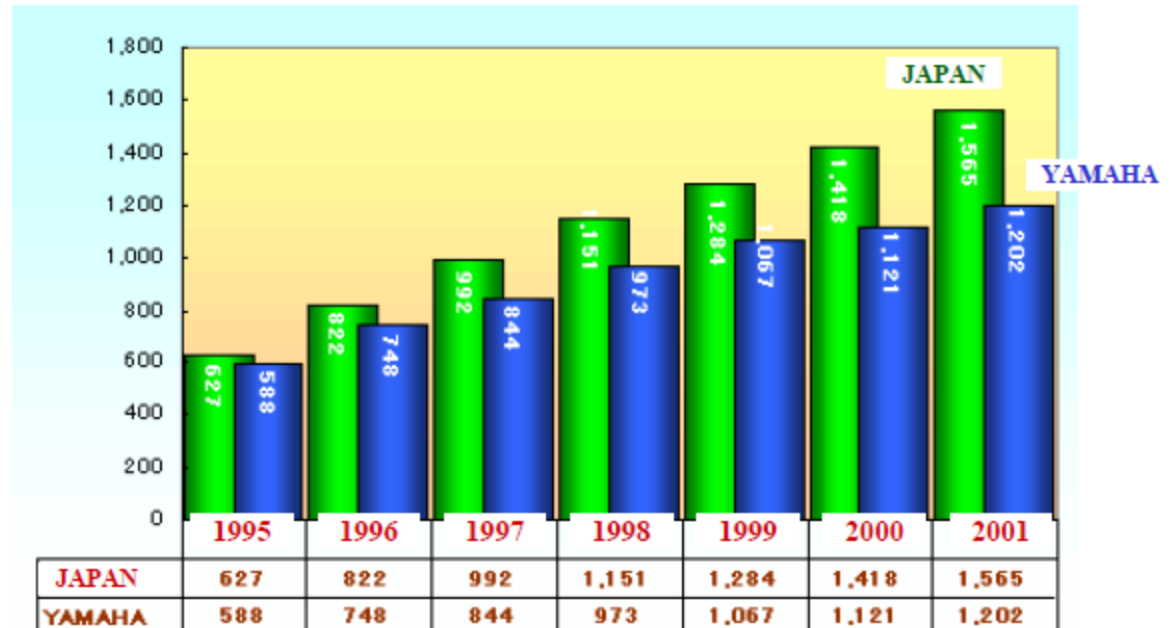
- * No Civil Aviation Authority regulations on UAV users in Mexico.
- * Actually encourage UAV use.
- * UASs used to monitor drug trafficking and university research.



Japan



- * UASs have been in use since 1980
- * Mainly agricultural purposes – in response to aging farming population



Japan



- * No common rules outside agriculture
- * Relatively open but under development
- * Recently used in Fukushima disaster monitoring



Africa



- * Relatively open slate
- * Continent wants drones
 - * Agriculture
 - * Wildlife monitoring
 - * Medicine delivery
 - * Military/enforcement purposes
 - * Many places \$\$\$ = yes



Opportunities



- * Manufacturers should utilize lax rules in foreign nations to research and test their vehicles
- * Research institutions should partner with schools or other organizations in countries with less regulation
- * Research into legislation and rules in other countries should be used to assist in the development of those items here in the U.S.
 - * Use success stories / avoid errors

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