

ATOLLS OF TUVALU

Created by Real-world Pilots for FSX Simmers



Graham Michael

Lead Software Design & Development

**Pacific Islands Simulation, LLC
Martinsburg, West Virginia USA**

www.islandsim.com
www.islandsim.com/pis_forum
toksawe@gmail.com

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1. GEO-POLITICAL BACKGROUND AND HISTORY

Tuvalu, pronounced "too-VAH-loo", is an independent constitutional monarchy in the [southwest Pacific Ocean](#) between latitudes 5 degrees and 11 degrees south and longitudes 176 degrees and 180 degrees east. Formerly known as the Ellice Islands, they separated from the Gilbert Islands after a referendum in 1975, and achieved independence from Great Britain on October 1, 1978. The population of 11,800 (est 2007) live on Tuvalu's nine atolls, which have a total land area of 10 square miles, or 27 square kilometers. This ranks Tuvalu as the [fourth smallest country](#) in the world, in terms of land area. The country name roughly translates to "8 standing together". This refers to the eight traditional islands of Tuvalu. The nine islands, from north to south, are: [Nanumea](#), Niutao, Nanumanga, Nui, Vaitupu, [Nukufetau](#), [Funafuti](#), [Nukulaelae](#), and Niulakita. The ninth island, tiny Niulakita, was inhabited only since the 1950's, and was not part of "ancient" Tuvalu. It is now inhabited by natives of Niutao.

(Source: www.tuvalu.islands.com)

2. PROJECT OBJECTIVES

Atolls of Tuvalu was re-created in FSX for two fundamental reasons: to "*capture*" the history and current state of the atolls as we know it in our lifetime; and to replicate the splendor and essence of flying in the fourth smallest country in the world within FSX.

The Tuvalu atolls have been a subject of international interests for quite a long time now, in fact since World War II. Apart from being used by American Forces (mainly Marines) during WWII as advance post for deterring Japanese attacks in the northern South Pacific in 1943, Tuvalu has been known in the scientific world as the most rapidly sinking country in the world. If the current sea-level rise prove accurate from various scientific experts, Tuvalu will be fully submerged within the next 50 years. Given that likely scenario, it is only appropriate that we digitize images and memories of the country through various mediums, including game genres such as our hobby (flight simulation) for future generations to see. In the interest of full disclosure, we may not accurately capture the entire country of Tuvalu in FSX but at least we can leave plenty to the imaginations with use of this product.

3. PRODUCT FEATURES

Although there are 9 atolls and islands forming the country Tuvalu, the software package - "Atolls of Tuvalu" - only covers the northern 7 atolls/islands.

Here's what the package specifically contain:

- 7 airports: Funafuti International (NGFU), Nukufetau (NGNA), Vaitupu (NGPF), Nui (NGFT), Nanumanga (NGMG), Niutao (NGTO), and Nanumea (NGME). The longest strip is at NGFU and is nearly 6,000ft long which can handle medium type aircraft such as B737, A320, etc, flying international routes. The shortest runway is over 2,700ft which caters for regional freight and tourism/sightseeing hops.
- Combination of over 10 seaplane docks and heliports including helipads on cruiseliners and cargo ship. All helipads are lighted for night operations.

- Combination of photoreal landclass/waterclass and vector polygons hand-drawn and customized to replicate white sandy beaches and vegetation texture.
- Sequential wave crash effects (cascades) more pronounced at coral reef outlines replicating real world.
- Customized vegetation typical of the region.
- Modern and traditional buildings such as primitive grass and coconut thatched dwellings.
- Multitude of objects and eye candies to discover.
- Various animals (crows, parrots, gulls, eagles, whales, dolphins, etc) with animation, including distinct sounds of nature from birds to waves crashing ashore.
- Night light effects on aprons, buildings and villages
- Chart for the region
- Airstrip Facilities Directory
- Friendly frame rates but recommend a decent medium to high-end system to run scenery at very high settings for an enjoyable experience.

4. SYSTEM-SPECIFIC REQUIREMENTS

Atolls of Tuvalu was developed on a high-end system but tested in low to medium-end system using both WinXP, Vista and Win7 platforms with medium to high-end graphic cards. Specific requirements include:

- Microsoft Flight Simulator 10 (FSX)
- Windows XP (SP2, SP3), Windows VISTA, Win7
- Pentium IV 2.6 GHz (2GHz Duo2Core Intel or equivalent advised)
- 1 GB RAM and above
- 256 Mb DirectX 9 graphics card (512 Mb or higher recommended)
- Adobe Acrobat® Reader 6 minimal to read and print manual.
- 380 MB of disk space (370 MB actual software file size)

5. RECOMMENDED FSX SETTINGS

Frame rates from scenery complexity and autogen settings were averaged at 28fps or higher. This includes moving sliders 100% to the right. Lower settings yielded much higher frames, but our recommendation is *Dense to Extreme Dense* for exceptional rates.

6. DISCLAIMER

No technical issues were encountered during various beta tests, whether hardware or software-related. Instructions for installation of software are straightforward; however, venturing outside bounds of recommended installation and use is at sole discretion of End-User.

We will not bear responsibility for issues resulting from installation of the product, in part or full, into former Flight Simulator platforms which includes FS2004 because the product is not backward compatible. Furthermore, we will not be held responsible if files are altered within software for any reason associated with End-User taste or choice.

The product is Non-refundable for these and various other reasons.

7. AIRPORT AND SEAPORT INFORMATION

All 7 airport creations are either based on corroborative real-world data or from narratives from Tuvaluans regarding historical evidence of airfield existence, and use, since World War II. The helipads are fictional, however, 7 seaplane bases at the 7 atolls/islands did exist in real-life during the early 70s up to the mid-1990s. A New Zealand registered company, Sea Bee Air, once thrived in the freight and tourism business during that period. The company employed two Grumman Gooses (registrations: ZK-CFA, and ZK_ERX) which were headquartered at Funafuti International airport.

Below are company hangars and amphibians in action.



(Source: http://brc58.multiply.com/photos/album/9/1979_Internal_Air_Service_-_Sea_Bee_Air)

8. NAVCOMM FACILITIES

Except for Funafuti International, Nanumea, Nanumanga and Nukufetau, other navcomm facilities are fictional. Navaids and communication facilities (and frequencies) were created mainly to support and facilitate third party addons such as FSCommander, G-Plan, etc to enhance simmers' virtual piloting experience. More importantly, these navaids were created as required addendum to non-GPS aircraft and for those IMC/IFR-inclined pilots.

9. **AIRPORT FACILITIES DIRECTORY**

FUNAFUTI INTERNATIONAL (NGFU)

RWY 03-21 H5,643x150ft (concrete) Elv. 9ft

Airport Operations: Day/Night ops attended F/T.

Navaid. FU – VORDME. 113.3 195.05nm range
FU – NDB. 340.0 75.02nm range

Communication. TWR: 126.400
APPR: 126.500
GRD: 126.400
ARTCC (NADI, FIJI): 126.700
ATIS: 118.700

Airport Remarks/NOTAM

- Locals and vehicles using/crossing rwy. All aircraft approaching from all directions must initiate a fly-over no lower than 1,200 ft to warn of impending landings. No straight-in approach to rwys permitted unless specifically instructed by TWR and APPR control.
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NUKUFETAU (NGNA)

RWY 36-18 H5,000x110ft (asphalt) Elv. sea-level
RWY 10-28 H2,900x60ft (dirt-sand mix) Elv. sea-level

RWY night lighting available only for 36-18.

Navaid. NA – VORDME. 113.30 100nm range

Communication. TWR: 126.400
GRD: 126.400
ARTCC (NADI, FIJI): 126.700
ATIS: 118.800

Airport Remarks/NOTAM

- Bird hazard at approach end of RWY 36 and end of RWY 18.
 - Night ops permitted
-

VAITUPU (NGPF)

RWY 13-31 H4,200x87ft (gravel-sand mix) Elv. 5ft

Navaid. PF – VORDME. 113.50 100nm range

Communication. TWR: 126.400
 GRD: 126.400
 ARTCC (NADI, FIJI): 126.700
 ATIS: 118.850

Airport Remarks/NOTAM

- Bird hazard at approach end of RWY 31.
 - Night ops permitted. RWY night lighting available
-

NUI (NGFT)

RWY 02-20 H2,742x70ft (sand-dirt) Elv. 1ft

Navaid. FT – VORDME. 108.20 100nm range

 FT – NDB. 401.00 50nm range

Communication. TWR: 126.400
 GRD: 126.400
 ARTCC (NADI, FIJI): 126.700
 ATIS: 118.20

Airport Remarks/NOTAM

- No RWY night lighting. Night ops prohibited
-

NANUMANGA (NGMG)

RWY 14-32 H3,755x73ft (sand-dirt) Elv. 1ft

Navaid. TG – VORDME. 114.50 100nm range

Communication. TWR (Niutao): 134.900
 GRD: 134.900
 ARTCC (NADI, FIJI): 126.700
 ATIS: 119.600

Airport Remarks/NOTAM

- Night ops permitted. RWY Night lighting available
-

NIUTAO (NGTO)

RWY 08-26	H3,752x74ft (sand-dirt)	Elv. 1.7ft
Navaid.	NIT – VORDME. 113.70 NIT - NDB. 534.00	150nm range 70nm range
Communication.	TWR (Niutao): 134.900 GRD: 134.900 ARTCC (NADI, FIJI): 126.700 ATIS: 113.150	

Airport Remarks/NOTAM

- Night ops permitted. RWY lights available.
-

NANUMEA (NGME)

RWY 14-32	H4,225x91.7ft (asphalt)	Elv. 1ft
Navaid.	ME – VORDME. 113.1 ME - NDB. 395.00	150nm range 50ng range
Communication.	TWR (Niutao): 134.900 GRD: 134.900 ARTCC (NADI, FIJI): 126.700 ATIS: 119.800	

Airport Remarks/NOTAM

- Bird hazard midfield.
 - Night ops permitted. RWY night lighting available
-

10. PRODUCT DISCLOSURE

Similar to any Flight Simulator (FS) Addon product, "Atolls of Tuvalu" may have issues that are either default Microsoft-related or developer-related. Issues that are MS-related, whether documented or undocumented are many, but we can only speak for our product. For some systems there may be minor micro-stutters resulting from having Water Effects at Max 2x (100% to the right) within Funafuti International airport surrounds. The work around for this is to lower the Water Effects slider one notch down to High 2x. Note that stutters are not experienced at all other airports, which means one can switch to higher settings at these scenes for best simming experience.

11. FAQ

1. Why is there no AI traffic at most airports?

We are working on a custom AI flight plan for Air Fiji which is the only airline in real world which fly the *Atolls* and international destinations.

2. Why am I not seeing road traffic at Funafuti and other major islands and atolls?

Funafuti, the Capitol and major business hub of the *Atolls* hardly have any vehicles on its roads in real life. Only the privileged few and government can afford ownership of vehicles. The main modes of transport between each end of the main atoll is either via motor bikes, bicycle, canoes, and speedboats. Adding AI road traffic to the scene would merely overstate and misrepresent actual realities of transportation life in Tuvalu.

3. I do not see any moving boat or ships in the scenery, why is that?

We will be working on custom AI boats and ships which would travel between atolls. This will be released free to those who purchase *Atolls of Tuvalu*.

12. ACKNOWLEDGEMENTS/CREDITS

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Graham Michael
Lead Software Design & Development

SCENERY AREA COVERAGE

